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MANUAL

OF

THE ANATOMY AND PHYSIOLOGY OF THE HUMAN MIND.

BY

THE REV. JAMES CARLILE, D.D.

OF DUBLIN AND PARSONSTOWN, IRELAND.

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PREFACE.

THE author of this little work has called it a Manual of the Anatomy and Physiology of the Mind;—of anatomy and physiology, because it is an attempt to do for the mind what anatomy and physiology do for the body, namely, to point out its various powers and operations, the place which they hold in the mental organism, and their connection with one another. He has called it a Manual, because it does not detail the trains of reasoning by which mental phenomena have been ascertained, and their bearing on the general system explained. Those who desire to dip more deeply into these reasonings, the author would refer to Dugald Stewart's historical essay "On the Progress of Metaphysical Science," written for the last edition of the Encyclopædia Britannica, and published also separately, as to a *Catalogue Raisonné*, where he will find the principal books on the various metaphysical topics noticed and described. And to this he would add Sir William Hamilton's metaphysical works, especially his edition of the works of Dr. Reid, with notes.

The author's aim has been to provide a book intelligible to the educated public generally; (not without hope of its being intelligible to the youth of both sexes, engaged in the higher classes of our best conducted schools,) conveying a distinct conception of the wonderful organism of the human soul in its connection with the body. The models which he has set before him have been such books as Sir John Herschell's popular work on Astronomy, and Paley's View of the Evidences of Christianity.

The author explicitly repudiates all claims to originality in any of his statements. Any person who has read Sir William Hamilton's historical notices of several metaphysical topics, will hesitate long before he even hint at such a claim on any subject. For himself, the author avows that not unfrequently, when he imagined that he had arrived at certain conclusions by his own excogitations, he has not only found them anticipated in other books, but in books which he had read, and from which he had, in all probability, but altogether unconsciously, derived both the conclusions and the reasonings on which they were established. Similar considerations have deterred him from stating from what sources he has derived his views. Such references are not required as authority; for a work of this nature is an almost incessant appeal to the reader's own consciousness; and Sir William Hamilton has again taught him, that in quoting authorities, he might be quoting only authorities at second hand. But while the author lays no claim to originality, the reader will find that the work is not a mere abridgment of any other book, nor a compilation from other books. The author has availed himself of all the information to which he has had access, but has not given himself up to the guidance of any one who has preceded him; and his work is an attempt to convey that view of the human mind, which he has been led to adopt by his inquiries, considerably modified by his own observations and reflections.

The work was suggested to the author in the course of preparing a few essays on the Interpretation and Application of the Old Testament Scriptures. An attempt to ascertain in what the image of God in the soul consisted, suggested the necessity of comparing what we know of the soul, by our own consciousness, with what is revealed of God in the Scriptures; and the author soon found the train of thought, into which he was then led, pass beyond the bounds of an essay fitted to hold a subordinate place in such a work as he contemplated—and he resolved to prepare a separate work on the Mind, to which he could afterwards refer. He has not in this volume entered on the consideration of the moral nature or state of man: but if this volume be favourably received, and if it should please God to prolong his life, and spare to him his faculties for some time longer, he may issue another volume, containing his views on these still more important topics.

The author trusts that his only desire is, that he may glorify God, by directing the attention of his fellow-men to his most wonderful work of creation—the immortal spirit of man—and prepare them for the better understanding of his Revealed Word. That his work may effect this object is his prayer and his hope through the kindness of God in Christ Jesus.

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MANUAL

OF

THE ANATOMY AND PHYSIOLOGY OF THE HUMAN MIND.

THE human mind, next to the Deity himself, is the noblest object of contemplation within the scope of our faculties. There are marvellous beauties scattered over the face of external nature; and the more the material universe is explored, the more perfect and the more beautiful does its mechanism appear. The unbounded space around us, with all its infinitude of worlds moving with inconceivable velocities, yet in most perfect order and harmony, is a most sublime and glorious object of contemplation. The earth on which we stand — its materials and its architecture, its infinitely various vegetation, and its still more wonderful variety of animal inhabitants,—discloses, the more it is examined, beauties and wonders lying deeper and deeper beneath the surface, and of endless variety. But in a human soul, perfect in its faculties, its understanding fully enlightened, its affections under just control and rightly directed,—in a moral character justly balanced and perfect in all its attributes; there is something beyond measure more glorious and beautiful than the whole range of external nature. One of our popular poets has said—

> "An honest man 's the noblest work of God."

Would that he had always written so justly! Besides, it is only by acquaintance with the human mind that we can rise to the contemplation of the Deity, or form any conception of Him. In directing our attention, therefore, to the structure of the human mind, its various faculties, their connexion with one another, and the principles on which they are regulated, we enter on the contemplation of an object that belongs to the very highest order of created beings. Other departments of created beings are governed and kept in order by mechanical laws, or chemical laws, which are probably also mechanical, but more recondite and complex, or by laws of vegetable and animal life, or by instinct. But creatures so governed are under no responsibility—they are incapable of engaging the affection, or incurring the displeasure, of the Creator; that is, they are incapable of virtue, and consequently of vice. Man is the only creature, with whom we are acquainted, who is capable of being governed by a law which he has power to obey or to disobey, a free agent—and so capable of drawing towards himself the approbation and love of his Creator, or of provoking His just indignation. That God could create such a free agent is the most incomprehensible of all His attributes, and would be incredible and inconceivable, but that every man has within himself the evidence of his own consciousness that he himself is such a being. This is the mystery of mysteries, including in it all those perplexing questions which have baffled the powers of thinking men, in all ages, to resolve:—such as, Whence came moral evil? Is man really free, or are his acts determined by necessity, so that he could not act otherwise than he does? If free, how can God foresee and control all events? If subjected to necessity, how can he be a moral and accountable creature?—and how can God be either pleased or displeased with him on account of his acts? All these questions would be solved if we could solve the preliminary one—"How could God create a moral and responsible being?" That He has done so we know from our own consciousness; by what exercise of power or will He has done so, is a question that strikes us dumb. When it is presented to us, we can but wonder and adore.

Now it is the nature of this first of created beings, within the range of our direct knowledge, that we are to contemplate, availing ourselves of the lights which have been thrown upon it by the researches of all past ages; and we shall find it to bear the evident traces of the workmanship of Him who created the heavens and the earth. Every where we shall find, as in the universe of matter, a small number of simple principles producing in their combinations the most wonderful and beautiful results.

ESSENCE, OR SUBSTANCE OF THE MIND.

Mind is distinguished from matter by its qualities. The qualities of matter are such as extension, form, motion, rest, heat, cold, hardness, softness, attraction, repulsion, and others of similar nature, discovered by our senses. The qualities of mind are such as thought, pain, pleasure, memory, discrimination, love, hatred, and others, which our consciousness makes known to us. It is probable that mind and matter are distinct in their essence or substance—that these two different kinds of qualities may each have a totally different substratum which combines their qualities respectively; but of the essence or substance of either mind or matter we are altogether ignorant. The atomic theory of chemistry renders it probable that all material things have a substratum of atoms, and that the various qualities of different material objects are caused by the different modes in which the atoms are combined, and also by diversities in the atoms themselves. That mind should be a mere aggregate of qualities, without a mental substratum or essence, is thus rendered improbable; but of that mental substratum, or substance, or essence, we know absolutely nothing.

THE MIND HAS NO INNATE IDEAS.

That the mind is destitute of all thoughts or feelings, that is, all actual operations, till it is awakened or set in motion (using that word figuratively) by external objects that affect the organs of sense, seems now to be the generally received opinion of all mental philosophers. It contains the qualities or aptitudes for its various operations before they are thus awakened, but they are lying dormant. Just as a piece of blue or yellow paper has no colour till the light shines upon it, but has such a contexture of its surface that when the light does shine, it is blue or yellow; so the mind is ushered into the world with the qualities or aptitudes for its various operations, but dormant until they are called into action by the objects affecting the bodily organs of sense with which it is connected. In this the mind is in similar circumstances with the body, which, in the womb, possesses all its organs of sense, of motion, of digestion and assimilation of food, of respiration, but asleep and motionless till they are brought within the reach of those various qualities in external objects that are fitted to awaken them and set them in motion. Or it may be compared to a repeating watch, complete in all its mechanism, its moving and regulating powers, its dial, its indices, and its apparatus for striking the hours, but all motionless and silent till an external power winds it up, and immediately its latent energies begin to manifest themselves.

BOOK I.

SENSATION—THE PHENOMENA CONNECTED WITH IT.

THE mind derives its capabilites of being affected by external objects, and then of operating upon these effects, comparing, combining, numbering, desiring, fearing, &c., from its original mechanism (if we may use that word in speaking of mind) as it comes from the hand of its maker ; but it derives its actual life and movement from the external world. The effect produced on the mind by external objects through the organs of sense is called sensation. Sensation, therefore, in metaphysical language, means the state into which the mind is brought when it is affected by any material object acting on any of the organs of sense. The word is frequently extended beyond this proper meaning, sometimes figuratively and sometimes inaccurately; but in any attempt to explain mental operations it should be carefully confined to its own proper signification.

CHAPTER I.

THE SENSES.

THE bodily organs of sense are five—namely, the organs of touch, taste, smell, hearing, and sight.

These organs consist of nerves or threads proceeding from the brain, formed of a substance so similar to that of the brain that they may be regarded as a prolongation of it, and ending, on the surface of the body, all of them, with the exception of the nerves of touch, at a particular spot, where an apparatus is provided for bringing the material substance that is destined to act upon them into contact with them under the most advantageous circumstances. The whole organ of each sense, therefore, may be regarded as consisting of three parts—first, the external termination of the sensorial nerve, and the apparatus there provided for bringing it into contact with the substance fitted to act upon it; secondly, the continuation of the nerves from the surface to the brain; and thirdly, its junction with the brain. So far, sensation can be traced, but no further. How material objects affect the extremity of the nerves of sense; how these convey the effect produced upon them to the brain, or how the brain affects the mind, so as to produce sensation, is altogether unknown to us. All that is known is, that certain kinds or qualities of matter affect, in some unknown way, the outward extremity of the different nerves of sense by the aid of the apparatus provided for bringing the material substance and the nerve into contact or communication with one another, as the tongue, the nostril, the ear, the eye; that these nerves are connected with the brain; and that the brain, or the extremity of the nerves in the brain, in some inscrutable manner, affects the mind variously, according to the particular nerve affected from without, and the nature and intensity of the effect on that nerve. It is known that the sensorial nerve is essentially the organ of sensation; for if that be injured, or its communication with the brain cut off, there is no sensation.

From this account of sensation it is obvious that there can be no similarity between the material substance or quality causing sensation, or the effect which it produces on the nerve, and the mental sensation occasioned by it. The pain occasioned by a blow can bear no resemblance to the instrument with which the blow was inflicted. All that can be said of the connexion of these two things is, that the pain immediately follows the blow, but how, we know not. The hearing of the sound of a bell bears no resemblance to the bell or to the stroke on the bell that caused it to produce the sensation of hearing. The sensation that follows the presenting of light to the eye bears no resemblance to the luminous object or to the light flowing from it, or to the eye, or to the motion of light towards the eye, or to the impact of the light upon the eye. All that can be said in explanation of the phenomena of the sensation is, that it instantly follows the presenting of the luminous object to the eye.

Touch.—The external extremities of the tactual nerves are spread over the whole surface of the body, with the exception of some portions which in themselves are incapable of conveying sensation—as the hair, the nails, the enamel of the teeth, the cuticle, &c. Sensations can be conveyed through these, just as they can be conveyed through any extraneous substance laid on any part of the body; but, in themselves, they are destitute of nerves, and therefore are incapable of causing sensation. The tactual nerves, therefore, have no apparatus at their external extremity, like the nerves of hearing, seeing, smelling, for bringing the material substance fitted to act on them into communication with them. The whole body is, to this sense, the external portion of the organ. The sensations derived from this sense are called feelings, although that word is often applied figuratively to emotions generally, as when we speak of a feeling of sympathy, of envy, of resentment, and many others.

The qualities in bodies that affect the sense of touch are motion, and heat and cold. Motion towards the body produces impact, or pressure, which excites the sensation of touch more or less strongly, according to the violence of the impact or the pressure. Liquids and gases, when in motion, occasion this sensation; but when they are at rest, they do not. Solids affect the sense variously, according to the nature and force of their contact with the tactual nerve. A sharp edge or point produces a different sensation from a blunt instrument, and both are modified by the manner and force of contact, whether a sudden blow or gradual pressure. The difference felt between hardness and softness resolves itself into greater or less violence of impact or pressure; and the difference between roughness and smoothness being merely difference of pressure on neighbouring portions of the nerve,—the projections of a rough body pressing more strongly than the other parts of it. In these statements we entirely exclude, for the present, all muscular exertion as connected with the sense of touch, and suppose the body to be entirely passive. The reason of this will appear as we proceed.

The tactual nerves are also affected with heat or cold; that is, if any substance at a higher or lower temperature than that of the extremity of the nerve at the moment of touch be applied to it, the sensation of heat or cold is excited in strength proportioned to the difference of temperature between the nerve and the object affecting it. If the temperature of the object be higher, the sensation will be that of warmth or heat, up to burning heat; if the temperature be lower, the sensation will be coolness, or cold, to freezing cold. It is somewhat remarkable that the sensation arising from extreme cold cannot be distinguished from that occasioned by extreme heat, both being destructive of the nerve. The pressure, or impact, also, of a sharp edge or point cannot be distinguished, by this sense alone, from burning heat or intense cold, probably for the same reason. Some chemical qualities in bodies, as strong acids, alkalies, and some salts, also produce sensations so similar to those which are produced by heated substances, as not to be distinguished from them by the sense alone.

Taste.—The external extremities of the nerves of taste are placed in papillæ, or little risings on the upper surface of the tongue, and the sensation is produced by the body exciting it being brought into contact with the tongue. The qualities in bodies which affect these nerves are called flavours, or sometimes tastes; as when we say of one thing, that it has a sour, and of another that it has a sweet, or bitter taste. But this is inaccurate language, for the material substance has not the taste which is in the mind, but only that quality which excites the sensation of taste in the mind.

The bodies that possess qualities fitted to excite the sensations of touch and taste, must, in order to do so, be brought into contact with the organ of sensation. In the senses which follow, the sensation is produced by certain emanations from the object that excites it.

SMELLING.—The nerves of smell, called the olfactory nerves, have their external terminations in the nostrils. The qualities in bodies that act upon them are called odours, perfumes, fragrance, stench, or, improperly, smells. The odours consist of an effluvia which the odoriferous body throws off, which mingles with the air, and thus enters the nostrils, where it meets the extremities of the olfactory nerves, and produces sensation. If an odoriferous body be present, but covered with a glass receiver, so as to prevent the odour from mingling with the external air, no sensation of smell will be experienced. This sense gives no intimation of the distance of the odoriferous substance, or the direction in which it lies, and no experience enables us to determine these points by this sense alone.

HEARING.—The nerves of hearing, called also the acoustic, or auditory nerves, have their outer extremity in the ear, where a beautiful apparatus is provided for collecting and conveying sound to them. The material substance that affects these nerves is the atmospheric air thrown into a tremulous, or vibratory motion by the vibrations of a sonorous body; therefore there is no sound in a vacuum. If a bell be hung in the receiver of an air pump, and the receiver exhausted, and the bell be shaken, so as to make the tongue strike the sides of it, no sound will be produced. If a little water be put into a glass tumbler, and a moist finger passed rapidly round the edge of the tumbler, a sound will be produced, and the vibrations of the glass producing the sound will at the same time be visible on the surface of the water. When the deeper-toned strings of a harp, or violoncello, or pianoforte, are twanged or struck, the vibrations that produce the sound are visible. The vibrations of the air produced by sounding bodies, and causing the sensation of sound, have been compared to the concentric circles produced on the surface of a pool of still water when a stone is thrown into it, except that the concentric vibrations in the air, causing sound, travel with much greater rapidity. The vibrations causing the sensation of sound, it has been ascertained, travel at the rate of a mile in eleven seconds.

This sense of itself cannot discern either the direction or the distance of the object from whence sound proceeds; nevertheless, direction, distance, the intervention of other objects, and many other circumstances, so modify the sensation caused by sound, that the mind, by accurately observing these modifications, learns to make good guesses at these particulars, but never learns to determine them absolutely. The most practised ear may mistake a faint sound proceeding from a body at hand for a loud sound proceeding from a distant body, or it may be deceived in regard to the direction from whence the sound proceeds. There is one peculiarity in the sense of hearing which deserves notice,—namely, that the acoustic nerves may be acted on through other parts of the body than the ear. A deaf man has been known to derive much pleasure from music, by making the nails of his fingers a medium of communication between himself and the musical instrument, and most persons are familiar with the experiment of suspending a bar of iron (a poker is often made use of for the purpose) with a string, holding the string in the teeth, and then striking the bar of iron. The sensation of sound produced is much stronger than it is when heard through the ear. Some substances have a singular power of conveying sound. If the ear be applied to a log or deal of timber near the one end, the slightest scratch at the other end will be distinctly heard. Soldiers in the field often discover the tramp of cavalry at a considerable distance by applying their ear to the ground. The teeth and other bones of the body may communicate the vibrations of sound to the acoustic nerves.

Sight.—The nerves of sight, called also the visual or optic nerves, have their outer extremity in the inner surface of the back part of the eye, called the retina. The material substance that acts upon these nerves is light. Light proceeds from every luminous body with extreme velocity, having been ascertained to travel at the rate of 192,000, say, for the sake of round numbers, 200,000 miles in a second. It has been supposed to consist of particles of matter of inconceivable minuteness, sent off in right lines from the luminous body. But the opinion seems to be gaining ground that it consists rather of the vibrations of an extremely subtle fluid every where dispersed, somewhat like the vibrations of the air which cause sound, but generated incomparably more rapidly in consequence of the incomparably greater subtlety of the fluid. The great objection to this theory is, that rays of white light are found to be composed of rays of differently coloured light, refrangible in different degrees, and that the rays of the sun consist not merely of light but of heat, and of other rays that produce a chemical effect on some objects on which they fall; the rays of light and heat and the chemical rays being also refrangible in different degrees. Whether the difficulties connected with the compound nature of rays of light, and the different powers which the same medium exercises upon different rays in refracting or bending them out of their straight course, shall ever be satisfactorily answered, cannot at present be known. It must, however, be admitted that there are difficulties connected with the other hypothesis, that light consists of particles of matter sent off from the luminous body in straight lines, which are scarcely less formidable.

The apparatus provided for collecting the rays of light and bringing them into contact with the optic nerves is the eye. This beautiful instrument consists of a hollow opaque sphere, placed in a circular aperture in the skull, having a small circular hole in the front of it for the purpose of admitting the rays of light into the interior of it. This circular hole, which is the pupil of the eye, has in connection with it a series of refracting media by which the rays of light entering it are collected on the surface of the retina, where an image of the external object from which the rays of light emanate is formed. The extremity of the optic nerve spread over the surface of the retina there meets with the rays of light forming the image of the object, and sensation is produced. The hollow sphere is furnished with muscles and every thing necessary for moving it in every direction, protecting it from injury, cleansing and moistening it, and thus fitting it for its important functions.

It has been supposed that the sense of sight intimates to the mind the direction from which the light proceeds. That the eye discerns the direction from whence light proceeds to it with much more precision than the ear discerns the direction from which the vibration of the air causing the sensation of sound proceeds, is certainly true. But we believe that this more exact discernment is not produced by the mere sense of sight, but by the muscular power of the eye in turning the pupil towards any luminous object. But the whole subject of perception by the senses will be more carefully considered as we proceed.

Three of these organs of sense have a double apparatus at the external extremity of the nerves of sense for aiding and regulating its access to the material substance calculated to affect them,—namely, the sense of smell, which has the two nostrils; the sense of hearing, which has the two ears; and the sense of sight, which has the two eyes. The sense of taste has only one such medium or apparatus for communicating with external things, the tongue; and the sense of touch has no particular apparatus of that kind, the extremities of the tactual nerves being, as we have said, spread over the whole surface external and internal of the body. The double apparatus possessed by three of the senses does not cause double sensation, but only strengthens the one sensation. The two nostrils do not cause a double, but a stronger smell; nor do the two ears cause a double sound, but strengthen the single sound. So, in a healthy and natural state of the eyes, the sensations produced by them is not double but single. But some diseases of the eye, or pressure on one of the eye-balls forcing it out of its natural position, causes double sensation. If the two eyes be directed to a very near object, more distant objects may be seen double; or if the eyes be directed to a distant object, and a near object, such as the finger, be interposed between them and the distant object, a double image of the near object may be seen. Thus, if both a near and a distant object be before the eyes at the same time, the near object may be seen double by directing the eyes to the distant object, or the distant object may be seen double by directing the eyes to the near object. Or, if the same distant object be seen by the one eye through a magnifying prospect-glass, and by the other naked, two images of the object will be seen; the one larger than the other, which, by a little management, may be brought near to one another, and compared, so as to enable the observer to measure the magnifying power of the prospect-glass. Or, the same object may be viewed by two prospect-glasses at the same time applied to the two eyes, and double images of the object produced, which may be compared, and the comparative magnifying powers of the two instruments ascertained. From such phenomena as these it has been conjectured that there are corresponding points on the retina of each eye on which, if a pencil of light fall, it produces but one sensation, but that if a ray of light from any object be made to fall on points which do not correspond, double sensation is produced. No artificial effect on the ears or the nostrils has ever been found to cause a double sensation of sounds or smells; nor are we aware that any disease of these organs has ever caused such a phenomenon.

CHAPTER II.

GENERAL OBSERVATIONS ON THE SENSES.

1. Each of these five organs of sense yield many different sensations; the taste distinguishes many different savours; the smell many different odours; the hearing many different sounds; the touch many different degrees and modifications of impact or pressure, and many different degrees of heat and cold; and the sight many different degrees of light and shade, and many different colours.

2. The various sensations caused by the different qualities in external objects, forms the only means of communication which the mind possesses with the material world. They have been compared to the windows through which the mind looks out upon external objects; but they are rather of the nature of apertures through which the material world finds access to the mind. The activity in establishing the communication is not in the mind, but in the external objects. It is the effluvia emanating from odoriferous bodies entering the nostrils; the undulations of the air from a sonorous body entering the ears; the rays of light from a luminous

body entering the pupils of the eyes, that awakens the mind to sensation, and not the mind already awake and active looking out for external objects. In two of the senses, the substances fitted to create sensation must be brought into actual contact with the organ before sensation is produced. When the mind is affected by objects of sense, it becomes active within itself, as we are to explain in the sequel; but originally, the sensation comes to the mind from without, and not the mind to the object of sensation.

3. These sensations form the elements and origin of all thought,—all pleasure or pain, and all intellectual operations. The mind once affected by them, works them up into a prodigious variety of most interesting and important operations, by comparing, discriminating, remembering, arranging, drawing inferences,—all the variety and complexity of mental operations. For apart from sensations, and the operations of the mind upon them, the mind would remain as dormant as when the body is in the womb.

4. Most, or all of these classes of sensations, seem to be capable of being excited by other means than those which form the usual causes of them. For example, certain diseases produce sensations of sound or noise that cannot be distinguished from the sensations produced by sounding bodies. Pressure, or impact on the eye, produces sensations similar to those produced by luminous objects. Whether the illusions produced by such diseases as delirium tremens be caused by effects on the visual nerves, or by some other internal cause unconnected with the nerves, must be left to the researches of pathologists; but that these phenomena are produced by the effects of disease on the visual nerves seems most probable, inasmuch as the illusions consist of images of visible objects. Some diseases in various parts of the body, external and internal, produce sensations that so closely resemble the sensations

caused by the pressure of external substances, or the application of sharp edges or sharp-pointed instruments, or the application of fire or of heated substances, that patients labouring under these affections always describe them by reference to the pain caused by such external applications; they say they feel as if there were a weight resting on the part, or as if it were pierced with a sharp instrument, or as if it were burnt. Whether unpleasant smells and tastes may not arise from diseases directly affecting the nerves of taste or smell, or whether these sensations may not proceed from odours or tastes actually coming up from the interior of the body to the palate and the olfactory nerves, is another question that belongs to pathology. There, however, can be no doubt that some sensations can be produced otherwise than by the ordinary process originating in an external body communicating with the mind through the organ of sensation.

5. When different organs of sense are affected at the same time—as the ear with sounds, the eye with light, the nostrils with odour, the sense of touch by contact with any substance; or when the same organ of sense is affected at the same moment by different objects—as the ear by different sounds, the eye by different colours, the nostril by different odours—the result is not one sensation modified by these different causes of sensation, nor a multitude of sensations affecting the mind simultaneously: but the effect is, that one sensation occupies the mind to the exclusion of the others, the mind being rendered for the time insensible to the other effects produced on the organs of sense. The causes that may give to one sensation its preponderating power to possess the mind exclusively, are various. Intensity is one of the most prevalent. A loud noise, a dazzling light, an intense odour, or savour, will occupy the whole mind for a time, precluding other sensations, although other effects are being at the moment produced on the

organs of sense, which, but for the absorption of the mind, would produce sensation. Another quality that may give to a sensation the power of exclusively occupying the mind is novelty. The cause of this will be explained as we proceed. Another quality in sensations that gives them power to fix the attention upon themselves, is the amount of pleasure or of pain which they occasion. An exquisite pleasure, which may be afforded by a very slight action on the sensory nerves, or a painful sensation, which perhaps is not always occasioned by too strong an action on the nerves of sense, but sometimes by the nature of the action, will irresistibly command the attention of the mind. Still another cause of the absorption of the mind by one sensation, is a desire accompanying it to examine or consider it, which desire may be excited by various motives. But of this, also, more as we proceed.

It has been argued, that the mind is capable of being affected by only one cause of sensation at a time. That, however, cannot be said to have been proved. On the contrary, there are phenomena that seem to militate against it; while, on the other hand, it must be admitted, that many of the phenomena that seem to exhibit the mind, as influenced by several sensations at the same time, are rather to be accounted for by a rapid transition from one sensation to another, than by an absolutely simultaneous attention to different sensations. Whether, indeed, all other sensations are excluded from the mind for the moment by the absorbing sensation, or whether the other sensations exist in the mind, but the mind is rendered insensible to them by the master sensation of the moment, is scarcely an intelligible question, and at all events one which it would be very difficult, if not impossible, to answer. There can be no doubt, however, that the general habit of the mind is to attend to only one sensation at a time.

This tendency of the mind to be wholly occupied with one sensation at a time has been regarded by some—perhaps, by metaphysicians generally—as a distinct power of the mind, and called "attention." But it ought, perhaps, rather to be regarded as a limit to its power than as a distinct power—a limit confining it to one object of thought at a time. The quality or adjunct of a sensation, which causes it to absorb the whole attention of the mind, is usually, we have seen, from without—some quality in the external object of sense. When it is in the mind itself, as when it consists of an accompanying desire to examine it, the motive to that desire is from without, or at least does not *originate* in any act of the mind itself. But we shall have occasion to return to this subject. We shall therefore retain the word "attention," but not signifying a distinct power of the mind, but as a limit to its capacity of receiving influences from without; or, more generally, a limit to its power of thought, confining it to one object at a time. The cases in which the mind seems to exert a power to command attention to any object of thought will come to be considered in the sequel.

6. Many of our sensations are either agreeable or disagreeable, some pleasurable even to ecstasy, and some painful to overpowering agony. Many which have become indifferent were either agreeable or disagreeable, pleasant or painful, on our first experiencing them. Perhaps, few or none were indifferent when first experienced, but have become so in obedience to a law afterwards to be noticed.

There are two causes which render sensations disagreeable. We do not here allude to secondary causes, such as the suggestion of painful recollections, but to the effect produced by them on experiencing them for the first time. The first is, too great intensity—too dazzling a light, too loud a sound, too intense a smell or taste, too great excitement of the nerves of touch, as by a wound, or a blow, or a pressure, or burning. The too violent action of any of the nerves of sense, render sensations, which would be pleasant if experienced in a slighter degree, disagreeable, painful, agonising, according to the degree of the too violent action on them. And it is to be observed, that too violent action on the nerves of sense does not depend exclusively on the external object acting on them, but partly on the state of the organ itself. The organs of touch are defended by the cuticle, which is itself a horny, insensible substance, sheathing them like a glove. If the cuticle be removed from any part, and the extremity of the nerve laid bare, the touch of the blandest substance becomes like the touch of fire. The nerves of the other senses seem to be protected in a similar manner, so that when any disease lays them bare, or more exposed to be acted on, the slightest excitement of them may become intolerable. The eye may feel the introduction of the faintest light to be torture, the ear unable to bear the slightest sound; and the taste and smell to be painfully affected with the gentlest savour or odour.

The other cause that renders sensations unpleasant, is something in the exciting cause of the sensation which all experience, but which cannot be defined. Some tastes and smells are unpleasant when experienced in the slightest degree. Some sounds also, as the creaking of rusty wheels or hinges, the filing of metals, especially in sharpening saws, and, to some persons, the cutting of coarse paper, create unpleasant sensations. Some tactile sensations, also, are unpleasant, such as that occasioned by a fringe or rag on one of the nails coming into contact with cloth, especially woollen cloth; although in this feeling, and, perhaps, in some others, there may be an admixture of unpleasant suggestions. We have never heard of any modification of light being in itself unpleasant to the nerves of sight. It is reported of a person, who received his sight at a mature age by a surgical operation, that he expressed the greatest horror when any black object was presented to him. But black is the absence of colour, and his horror might be occasioned by its reminding him of the darkness from which he had been delivered, and in that case would rather prove the delight which the sensation of sight afforded him. We have known a man blind from early infancy, but who still retained the power of distinguishing bright light from darkness, taking great pleasure in going out to the open air on sunny days, and rolling his sightless eyeballs opposite to the sun, and declaring that he would not exchange the sensation which he experienced for any worldly emolument. Sensations unpleasant in their own nature are chiefly confined to the senses of smell and taste; which, having the office assigned to them to judge what is fit or unfit for food, and the substances which are unfit for food far outnumbering the others, one might expect that the disagreeable sensations of smell and taste would far outnumber those that are agreeable. But most substances that are unfit for food are destitute of odour; and if they have an unpleasant savour, they must actually be applied to the tongue before they can produce sensation. The sensations of smell and taste are thus much more within the power of the will than other sensations. But, excluding the sensations of smell and taste, we conceive it highly probable that all other sensations, all sights and tactile feelings, with the few exceptions noticed above, are, when not too intense, originally pleasant, many of them exquisitely so. Bright light, whether white or coloured, if not too intense—all sounds, if not too loud, especially musical sounds—seem always to afford pleasure to an infant. And when an infant, very recently introduced into the world of sounds and sights, and feelings, and tastes, and smells, is awake, and even when it is asleep, its little countenance indicates a constant play of agreeable or disagreeable sensations; the transition from the one to the other, from the smile to the frown, and from the frown back to the smile, being rapid and incessant.

We conclude, therefore, with expressing our conviction that all sensations, when first experienced, are either agreeable or disagreeable, pleasant or painful.

When sensations, whether pleasant or painful, are long continued, the pain or the pleasure gradually subsides; pleasant sensations become indifferent; slightly disagreeable sensations also become indifferent; and very painful sensations, if they do not become indifferent, become much more tolerable. The sweetest sounds, and the most beautiful and brilliant colours, cease, by continuance, to afford the delight which they at first gave; so also the most exquisite perfumes and savours lose their power of affording pleasure. Painful sensations also tend to lose their power of giving pain, and to become indifferent. People who live in the midst of the most offensive smells, or the most discordant and deafening sounds, gradually become insensible to them.

There are two causes which contribute to this effect; but whether they be the only causes we are not prepared to assert. The first is, that the organs of sense seem to become insensible to the pain or pleasure of any sensations. Take a familiar example: put one hand into water hotter than can be borne without great pain, and you cannot keep it in the water for a single second; yet if it be not hot enough to blister the skin, you may, by trying it several times, at length be able to keep it immersed in the water without any pain. That this does not arise from the water having cooled, you will find by trying the other hand; and you will find it still too hot for that hand, till, according to the common expression, it has become accustomed to it. In the same manner the palate becomes accustomed to the most pungent tastes—strong pepper, mustard, or ardent spirits, so that they can be swallowed without pain. This is a most merciful provision in a state in which we are exposed to so much pain; and to what extent causes of pain the most excruciating when first experienced, may lose the power of giving pain, it would be difficult to say; and how far the gradual alleviation of such pains as toothache, rheumatism, wounds, fractures, dislocations, even cancers, and the power of bearing these maladies with equanimity, may be due to this merciful provision in our constitution, deserves the consideration of pathologists.

Another cause which contributes to the diminishing and gradual cessation of the pain or pleasure of long-continued sensations, is that they lose their novelty, and so lose that power of fixing the attention upon themselves. We have said that one cause of any sensation drawing the attention exclusively to itself, was its novelty; but if any, either pleasant or painful, sensation, be long continued, it of course loses that power over the attention, and the mind becomes more at liberty to attend to other objects. This, doubtless, is one of the reasons why the pain and the pleasure of any sensation is always greatest on first experiencing it. The very novelty of it draws the attention forcibly to it; but when the novelty passes away, other sensations acquire power to draw away the attention from it: hence the efficacy of new sights and sounds employed by nurses to draw off the attention of children from causes of pain and irritation. We shall have occasion to return to this important phenomenon in treating of memory.

We add for the present, respecting this abatement of the pleasure or pain entering as elements into our sensations on the prolongation or repetition of them, that it is the cause of so large a proportion of our ordinary sensations being indifferent; and not that any of them were from the first indifferent.

Those sensations which gave more exquisite delight on first experiencing them, seem to pursue a rather different course when frequently repeated. They, too, first become indifferent by repetition; but on the repetition continuing, they become unpleasant and irksome, til the unpleasantness or irksomeness itself follows the general law, and sinks into indifference. A savoury dish presented for many days successively, becomes nauseous; but if it continue to be repeated, especially if it be the only means provided of allaying hunger, the dislike with which it was received passes away. A piece of music that threw us into ecstasy when we first heard it, becomes, by long-continued repetition, first indifferent, then irksome, and again indifferent. These more exquisitely pleasant sensations proceed by a more circuitous route than ordinary sensations to the common tomb of indifference. A sensation, or series of sensations, that have thus lost their power of yielding pleasure, and have become indifferent, may even recover the power of yielding pleasure, but pleasure of a different kind. It may become connected in the mind with other pleasing sensations, and yield pleasure by recalling these. A tune that has ceased to give pleasure from its own original power, may, by being sung on occasions of hilarity and social enjoyment, fill the heart with gladness when it is occasionally heard. The National Anthem, by being used as an expression of loyalty and nationality, may yield enjoyment by exciting feelings of respect and affection for a beloved sovereign in the hearts of a loyal people. The sound of bagpipes in a foreign land may excite overpowering delight in the heart of a Scottish Highlander, by recalling to him the scenes of his distant home.

Unpleasant sensations follow a similar course by repetition. They become first indifferent, many of them afterwards pleasant, and then again sink into indifference. Such substances as tobacco, mustard, porter, ardent spirits, occasion at first unpleasant sensations; on being repeated frequently, the organs of taste become reconciled to them, and they become indifferent; and they may afterwards recover a secondary power of yielding pleasure, chiefly that of allaying a painful sensation occasioned by their absence: for this, we apprehend, comes to be the only pleasure which the use of such substances as tobacco, mustard, or alcoholic liquors, yields to those who are addicted to the use of them. The original dislike of them, and the pleasure which succeeded to it, have both long since ceased; but the continued use of them has created a craving after them by their action on the gastric or olfactory nerves, the pain of which they allay for a short time; and the allaying of pain is one of the most common, as it is the most exquisite, of our enjoyments. Some of these habits, particularly smoking tobacco and drinking intoxicating liquors, may derive their secondary power of yielding pleasure, from their recalling scenes of companionship and hilarity.

We come now to two observations on sensation of the very highest importance in the study of the human mind, and which will necessarily modify the form and order of our further investigations. The first observation is—

7. That none of these classes of sensations, nor all of them together, could of themselves convey to the mind any notion of any being external to the mind itself, and consequently could never awaken any of those emotions or operations of the mind which imply the knowledge of an external world, or of other minds. This truth is now generally, perhaps we ought to say universally, admitted by all who desire to be regarded as mental philosophers in the proper sense of the word—men who seek their knowledge of the mind as they do their knowledge of the material world, by observing phenomena, and who do not feel themselves at liberty to indulge in the flights and fancies of what is called "transcendental philosophy"—a sort of philosophy which we are more disposed to compare to an ineffectual groping in mud, than to the more pleasant, though equally ineffectual, mental exercise of flights and fancies.

Without attempting to repeat, or to abridge, the various arguments by which this great truth has been proved to the satisfaction of all mental philosophers, we shall endeavour to give such an illustration of it as may reconcile to it the minds of persons unaccustomed to mental investigations.

Let us, for this purpose, suppose a human mind, with all its natural faculties, connected with a body possessing all the organs of sense, but without power to move any muscle of the body. If we may be indulged in so monstrous a supposition, let us suppose a human mind connected with a human head laid motionless, with its face upwards, like a head of wax; the eye and the mouth open, but perfectly motionless, the nostrils and the ears exposed to odours and sounds, and the whole face having the sense of touch, and all the organs of sense perfectly fitted for conveying to the mind all intimations from without; and let us consider what operations the mind would be capable of in such circumstances, and the nature and amount of knowledge to which it might attain.

We have said, that in such circumstances it could never attain to any conception of anything external to itself, or of any being besides itself.

Let us commence with the sense of sight; for, if we succeed in convincing any one that this sense would not of itself convey the notion of external objects, we shall have no difficulty in convincing that none of the other senses would convey to it that notion. We are so accustomed to imagine that we see external objects by the eye—and not mere varieties of light and shade, which we learn by practice to decipher, and understand that these varieties of light and shade are produced by external objects in various positions—that persons unacquainted with metaphysical inquiries may find it difficult to believe that any object can be presented to the eye without conveying the idea of its existence external to the eye. It may help to get them over this difficulty to consider how easily the eye is deceived by a well-executed painting. The painter, according to certain rules of perspective, draws an outline of different objects, in various positions and various distances; he then colours his outline with various tints, lighter and darker; and the result is that he makes people imagine that they see objects in different positions and different distances, when all that they do see are merely a few lines, and different patches of colour, on a perfectly flat surface. Again, if any person look attentively for some time at a bright object, as, for example, a window through which he sees a bright sky, and then shut his eyes, he will see the window, as if it were floating before him, of a different colour from what it was when his eyes were open looking at it; and yet he knows that it is not floating before him, but entirely in his own mind. These facts may aid them in believing what has been proved to the satisfaction of the most sceptical—partly by investigating the nature of visual sensations, and partly by observing phenomena—that it is only by practice and experience that we learn from the sense of sight the existence, and positions, and comparative distances of external objects. In a celebrated case, reported by Dr. Cheselden, of a youth receiving the sense of sight by a surgical operation, it was found that, on first opening his eyes to the light, all objects, at whatever distances they might be, appeared to touch the eye. We apprehend that this notion of external objects touching the eye was derived, not from the sense of sight, but from his previous knowledge that there are external objects, and his habit of tracing all sensations to external objects. Had these been his first sensations, he probably would not have known that they came through the eye; but he was previously acquainted with the structure of his body, he was familiar with the sensations derived through the other organs of sense, he perceived at once that these new sensations were different from the others, that they were neither sound, nor smell, nor taste, nor feeling; an operation had been performed upon his eye by which his attention was directed to that organ, as well as by the previous conversations which he must have had respecting his blindness, which induced him to submit to the operation. Had it not been for all this amount of previous experience, he probably would not have traced the sensations to his eye rather than to any other part of his body. In all similar operations that have been performed, by which persons capable of describing their sensations have first received the power of seeing, it has been found that the magnitude, distance, figure, and position of objects were all to be learned like a new language; and that when objects of different forms, as a cube and a sphere, were first seen by one who was previously acquainted with them, they could not be distinguished, by their appearance to the eye, so that the one could with certainty be said to be the cube and the other the sphere. Infants have, for a considerable time, no conception of the relative distance of objects. They stretch out their hands to touch or lay hold of the moon as readily as any other shining object that is near them. To a mind, therefore, circumstanced according to our hypothesis—connected with a body destitute of all power of motion—the various objects of sight presented to the eye would merely be like those visions of visible objects that seem to float before the eye when it is closed after looking steadfastly at them; but instead of viewing them as floating before the eye, which is a notion that we derive from our habit of regarding all sensations as coming from without, it would conceive of them, as those floating visions in fact are, as only in the mind itself, without any separate existence from it.*

But if we could derive no knowledge of external objects from the sense of sight, much less could we derive such knowledge from the sense of hearing, or tasting, or smelling; for even with all our experience, these senses give no notice of external bodies, their direction, or distance, or form, nor even of their existence, except in consequence of our habit of tracing all sensations to some external cause. A mind circumstanced as we have supposed would be affected by different sounds, smells, tastes, merely as if they arose in the mind itself, without suggesting any cause.

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* See Note A. in the Appendix.

It has been supposed by many of the latest and most enlightened writers on the mind, that we derive our knowledge of external objects from the sense of touch. That, however, to a mind in the condition supposed, seems to be impossible. No variety of tactile sensations, affecting the cheek or any part of the head, the touching or pressing any part with a blunt or a pointed instrument, rubbing it with a smooth or a rough surface, or the introduction to it of a cold or a heated atmosphere, could convey to it any conception of material substance acting upon it. These various modifications of feeling would appear to arise in the mind like the sensations derived from sounds or odours, without suggesting any external cause. Even with all our experience, we could not distinguish a puncture or cut with a sharp instrument from a touch of fire, or a drop of scalding water, or a touch of caustic. Our internal feelings of pain give us no intimation of the cause of it. We learn to judge of external objects by the modifications of the sense of touch, just as we learn to judge of them by the modifications of the sense of sight; but neither the one sense nor the other, nor both combined, would convey to us any notion or knowledge of objects external to the mind itself. The manner in which we obtain the notion of the external world, we shall endeavour to trace in a subsequent part of our investigation.

The second of the two important observations to which we have particularly called the attention of the reader is—

8. That none of these sensations, nor any succession of them, could convey to the mind the notion of cause and effect. It has been argued that every change in the state of the mind necessarily suggests some cause of that change, at least that there must be such a cause. It is true that, having previously obtained possession of the notion of cause and effect, we do naturally ascribe every change to some cause. But in a mind circumstanced according to our hypothesis, we do not see how such a notion could be obtained. It is manifest that it could not ascribe the changes taking place within itself to any cause external to itself, for it has not acquired the notion of anything beyond itself. If, therefore, the idea of cause could arise in it, it could only be a cause within itself. Yet it could not regard a previous sensation as the cause of the following one, for that would be contrary to truth. Whether the revival of sensations in memory (to be treated of immediately) would suggest the idea of the original sensation being the cause of the remembrance of it; or whether a sensation or thought suggesting another thought might introduce the notion of its being the cause of that other thought, might appear more doubtful; but without arguing the point, we only express our conviction, that the notion of cause and effect is obtained in another way, to be afterwards explained. In the meantime we proceed to consider the attainments which a human mind might make, circumstanced according to our hypothesis, open to influences from without, through the organs of sense, but destitute of power to move any muscle of the body.

CHAPTER III.

MEMORY.

If the various sensations that affect the mind were, on their ceasing, to pass away for ever, leaving no trace behind, the mind would be somewhat like a mirror with various objects passing before it, each producing its transient effect, and then vanishing; or like a musical instrument on which a tune has been played, which retains no trace of the tune, nor any peculiar aptitude for repeating that tune. But the mind is unlike the mirror or the musical instrument in this, that sensations which it has once experienced may be recalled to it without the intervention of the external object which originally awakened them. The mind is so constituted, that it may experience again, but with some modifications, the sensations of light and colour which it once experienced, without the help of the same external objects to reproduce those sensations; and to hear again, with certain modifications, the tune which it has once heard, without the help of the instrument, or of the musician who performed upon it.

Some metaphysicians confine the word memory to those instances of *re*cal or *re*presentation of any sensation to the mind, in which it remembers along with it the time and circumstances in which it originally experienced the revived sensation, or at least is conscious that it did experience it. But surely if a sensation be recalled, it does not make any difference in that power of the mind which recalled it, that we remember, or do not remember, when and how we originally experienced it. We shall have occasion to return to this topic.

Thus, if the toll of a bell be heard, another toll of the same bell some time afterwards will recal to the mind the former toll; or if a bright light be once seen, a second sensation afterwards, caused by a bright light, will recal the former; and so with regard to sensations received through any of the senses.

Nor is this power in one sensation to recal another confined to sensations of the same organ recalling one another. Sensations of sight may recal sensations of sound, or sensations of sound may recal sensations of sight; and so of all the senses, the sensations of which may reciprocally recal one another.

Neither is this power confined to sensations recalling sensations similar in any respect to one another. A gentle sensation may recal a violent one; a long continued one may recal a transient one, or the contrary. Nay, the very dissimilarity of sensations may be the means of recalling one another.

Again, sensations that are experienced at the same time, or in immediate succession, naturally recal one another. If a mind in the condition which we have supposed were open to the vicissitudes of day and night, and if, immediately before daybreak, the sound of a drum were heard, then the sound of the drum would certainly recal the sensation of light formerly caused by the daybreak. Or, if immediately before the setting in of darkness the sound of a bell were heard, the sound of the same bell would certainly recal the sensation of darkness.

If, during the day, artificial darkness were produced, it would recal the sound of the bell which on former occasions had preceded darkness; and if, during the night, artificial light were introduced, it would recal the sound of the drum by which, on former occasions, the sensation of light had been preceded.

If bright light were generally accompanied with heat or warmth, then bright light would recal the sensation of warmth, and warmth the sensation of bright light. Or, if a particular smell and taste were experienced together, either of these sensations would recal the other; and if they were preceded or accompanied by the sound of a bell, then any one of these sensations, the taste, or the smell, or the sound, would recal the others.

If a number of sensations were frequently repeated in the same order, such as the various modifications of sound forming a tune, they would be recalled in the same order. By frequent hearing of a tune, the whole sounds of the tune may be recalled in the same order, while no two of them may be recalled in the reverse order. Perfect familiarity with a piece of music does little to enable us to perform, or remember it backward.

Hence we may learn the importance of observing a certain order, so far as it is practicable, in the fulfilment of all necessary duties. By the repetition of them in the same order of succession, each as it is finished will suggest that which is to follow, as every note of a tune suggests its successor. Whereas, if one duty sometimes precedes, and sometimes follows another, and, consequently, each is sometimes followed by one, and sometimes by another duty, some must always be in danger of being omitted.

This power, or capacity, or aptitude of the mind for having past sensations renewed is called memory, and the reviving or renewing the sensations is called remembering them, for memory is never exercised but according to those laws by which past sensations are recalled. These laws are sometimes called laws of association, or, more correctly, the laws of suggestion. As memory is the power or aptitude of the mind for having its past sensations recalled or revived, so the laws of suggestion are the laws by which recals or revivals of sensations take place.

We have spoken of sensations recalled as if the sensation itself were repeated; but there is a wide difference between a past sensation being revived in the mind and a similar sensation being excited by the same external object affecting the organs of sense. Thinking of or remembering anything that we have seen or heard is very different from seeing or hearing it again. The amount and nature, however, of the difference between an original sensation, and the same sensation remembered, is not very easy to determine. Much of the indistinctness of remembered sensations, when compared with the original sensations, is doubtless to be ascribed to the multitude of different objects which during our waking hours are operating on the organs of sense, and, as it were, soliciting our attention; for however intent we may be on any remembrance, present objects are seldom or never excluded from all share of our attention. But when external objects are absolutely excluded, as in sleep or in waking reveries, remembered sensations sometimes assume much or all of the distinctness of reality. Yet, even in these cases, we question whether the remembered sensation is ever so vivid as the original one. We may be impressed with the reality of the objects that occupy the mind in dreams, but that is because they are not brought into contrast with original sensations; but it does not follow that they are in any case so vivid as original sensations. The pain of a toothache remembered in a dream is very different from an actual repetition of the pain. The one would probably awake us; the other, although we believe it for the time to be real, permits us to sleep on. We sometimes say that we remember a transaction or event at which we were present as distinctly as it appeared when we witnessed it; but this is always, we apprehend, either figurative or erroneous language. It is a wise provision that there should be a clear, distinguishable difference between actual sensations and the remembrance of them, either when asleep or awake; for were it otherwise, it would be impossible to distinguish between real transactions and the remembrance of them, and the boundaries between truth and falsehood or fiction, would be thrown into uncertainty. Nor are we quite certain whether the habit of lying, in some instances, may not have arisen from a state of mind by which former sensations are recalled with more than usual vividness, so that the story-tellers have mistaken their dreams or waking reveries for realities, and repeated them as if they were so. We remember one of the most truthful persons whom we ever knew describing in glowing terms the sensations he experienced from taking a mustard-vomit when he was a boy—the torture of it, as if it had been liquid fire that was passing down his throat. His elder brother, a man of equal probity, who was present, said to him, "You altogether forget, it was not you who took the mustard-vomit; but myself, and you heard me describe the effects in those very words; and they seem to have made such an impression upon you that you have come to imagine that it was you who experienced the sensation." They were both convinced that no second mustard-vomit had been administered, and the point was settled by the younger brother being satisfied that it must have been as the elder brother explained it. This, although not exactly a case of remembered sensation, is sufficiently near it to illustrate the supposition that men may mistake remembrances or imaginations for realities.

There are, it would appear, affections of the brain in which objects are recalled even in waking hours with much of the distinctness of reality. We have read, in the "Percy Anecdotes," (vol. xi., p. 3,) a narrative which bears upon it the marks of truth, that will illustrate this subject. M. Nicholai, a member of the Royal Society of Berlin, presented the narrative to that institution. He states that he had been under some great anxiety and distress of mind for a considerable time. When he was one day, in 1791, sitting in a room with his wife and another person, he saw suddenly standing before him, at the distance of about ten paces, a person whom he knew to be dead. M. Nicholai was of course greatly agitated.

He pointed to the spectre, and asked his wife if she did not see it. But she saw nothing. The figure, after remaining seven or eight minutes, vanished. In the afternoon it appeared again, when he was alone. He was again greatly alarmed, and joined his family in another room; but thither the figure pursued him, sometimes present, sometimes vanishing. About two hours after this, several other stalking figures appeared. Similar appearances occurred again and again, sometimes of living and sometimes of deceased persons, till he became familiar with them, and able calmly to examine them. Sometimes several persons would appear to him at the same time, talking to him or to one another, in the presence of his family, and he could converse with his family respecting them, tell them who they were, and what they were saying to him. He observes, that he could always distinguish these spectres from real persons present. They would appear to open the door and enter the room, but he never mistook a real person entering the room for one of these illusions. The distinction between these appearances and realities, he observed, was, that the colours of the former were less vivid and distinct than those of the latter. The general course of their conversation to him was condoling with him on the cause of his distress. At length he was so constantly haunted with them, the whole space around him appearing to be filled with them, even when he was walking in the street, crowding upon him, and talking to him, that he resolved upon having his head leeched. While this operation was going on, the whole room seemed crowded with these spectres of his imagination. But some hours afterwards they appeared to move more slowly, their appearance became more faint, they first lost all colouring and became white; then parts of them began to disappear, leaving only imperfect parts of figures remaining, till the whole illusion, finally, was obliterated; and at the time when he wrote the account of his case, which was a considerable time afterwards, he had had no return of it.

This narrative may help to explain many of the stories of ghosts, second sight, &c., which are always most prevalent in an unsettled state of society, when the minds of people are kept in constant excitement and dread; and the best-recorded instances of their appearance have been under circumstances calculated to excite and agitate the minds of those who are reported to have seen them. The faintness of the colouring, also, and the disappearance of all colour, and also the mutilated figures seen by this gentleman as the disease was subsiding, may account for apparitions being represented as always pale and dressed in white, and also for the imperfect forms in which they are reported to have appeared. Abercrombie mentions a lady who, while recovering from a debilitating fever, was visited daily by the spectre of a deceased friend. As she regained strength, the appearance became fainter and fainter, till it disappeared. Professor Alison mentioned in his lectures, that, after a fatiguing day, he would see numbers of faces looking at him through the curtains. These visions were not unpleasant. They were never the faces of persons he knew. A farmer mentioned to a friend that one of his shepherds, an old man, used to see cattle going in rows at a distance from him; that, until he discovered the illusion, he had weary walks through the fields to drive the supposed animals out of the corn.

But what is most directly to our present purpose is, that this case, as well as the phenomena of memory, waking or sleeping, seems to indicate that remembered sensations differ from real sensations chiefly in this, that the remembrance of a sensation is sufficiently distinct to enable us to identify it as the reviving of the original sensation, yet is never so strong or vivid as the direct effect of the object of sense upon the sensory organs. That the remembrance of sensations, however, may be exceedingly distinct and vivid is manifest from this, that a painter can copy from them very exact pictures, both in outline and colouring, of the original object; that a musician can perform pieces of music from memory; a cook and a perfumer can mix up ingredients so as to reproduce savours and odours, with much exactness, from the memory of sensations which they have experienced.

Although sensations when recalled by memory are less strong and vivid than they were originally, yet, with that exception, they are recalled as they were experienced, both with their distinctive characters from other sensations, and the pleasure or pain which originally belonged to them. Thus, if the sensation caused by a bright light be accompanied with pain, in remembering the bright light the pain will be remembered also. A child on whom a painful operation has been performed, instantly shrieks and weeps at the sight of the surgeon who performed the operation, or at the sight of his instrument, or at the sight of any person who reminds him of the surgeon, or of any implement that reminds him of his instrument. The whole operation is thus clearly in his mind, and he dreads the repetition of it. A child that has taken a nauseous medicine will sometimes be so vividly reminded of the taste of it by seeing a second dose of it poured out for him, as to have his stomach excited even to vomiting. It has been supposed that in such cases the effect is produced chiefly by the hope or the dread of a repetition of the sensation. But although, doubtless, that element will render the remembrance more vivid, chiefly by fixing the attention more intently and permanently upon it; yet we are satisfied that the prospect of the repetition of the sensation is not the only, nor even the chief cause of the effect sometimes produced by the remembrance of sensations. We have known persons, after having been sick at sea and on shore themselves, have this squeamishness and nausea revived by merely seeing a vessel rolling and pitching in a heavy sea, and even by looking at the motion of the waves. We know a person who cannot read, or hear, of others ascending great heights, as the masts of ships, or precipices, or lofty mountains, without having his nervous system so painfully excited, as sometimes to cover him with perspiration. On the other hand, how often does the mere sight of an instrument of music used in dancing excite gaiety and merriment, even in persons whose dancing days are over; and how often does the mere sight, or smell, or the remembrance of any kind of savoury food, excite the nerves of the palate, so as to fill the mouth with saliva. These, and numberless similar phenomena, indicate that when past sensations are recalled or suggested, the pleasure or the pain which they originally excited is strongly revived in the remembrance of them.

Still farther, sensations may be recalled not only by the actual repetition of similar sensations, but one remembrance of a sensation may recal another, and that a third, and so on in endless succession. The first one or two notes of a tune heard or remembered may recal one after another all the following notes of the tune, in the succession in which they were originally heard. That tune remembered may recal other tunes, or it may recal some sensation, some sight or feeling, that accompanied it when it was first heard; and any of these remembered sensations may recal others in infinite variety, and with wonderful rapidity.

There seem to be considerable diversities in different minds relative to their aptitude for recalling sensations. Some minds seem more readily to have the sensations of one sense recalled, and other minds the sensations of another sense. One has more facility for remembering tacts, another smells, another sounds, and another sights. This may arise from the minds or the organs of sense being so varied in their constitution or condition, that one mind receives more pleasure or suffers more pain from one class of sensations, and another mind from another class. Whether this diversity is caused, or, at least, indicated by differences in the formation of the brain, as phrenologists believe, is perhaps not yet determined on either side by physiologists. If there be good foundation for the phrenological theory, here may be the germ of it. But whatever may be the cause of this diversity of constitution, or condition, of different minds, there can be no doubt of its existence; and here we may have the embryo of the gourmand, the perfumer, the musician, the painter, and the statuary.

There is another diversity regarding the recalling or remembering of past sensations in different minds, which produces important effects on the character and happiness of different individuals, namely, that in some minds pleasant sensations are most easily and frequently recalled, and in others painful sensations. In some persons not only will pleasant sensations easily recal pleasant sensations, but even painful sensations will recal pleasant sensations; while in others, not only will painful sensations recal former painful sensations, but even pleasant sensations will recal painful ones. The former of these states of mind naturally produces habitual cheerfulness, the latter habitual melancholy. Whether this diversity originates in the structure of the brain, we must again leave to the investigation of physiologists. It cannot, however, we believe be denied, that the one or the other of these characters of mind is much influenced, if not produced, by the general state of the body in regard to health or sickness, by education, by society, by occupations, by habit, and other similar causes.

But, leaving these way-side observations, we proceed to remark further, that the more frequently any two or more sensations, or remembered sensations, occupy the mind in immediate succession, the more certainly and the more instantaneously will the one recal the other, especially the first recal the second and following. Of this we have a familiar example in learning a tune. On first hearing it, we may be able to repeat scarcely two successive sounds of it; but after hearing it, and attending to it repeatedly, the hearing of the first two or three sounds of it will recal all the others in regular succession; and so rapid and so certain may the suggestions become, that every sound will present itself as promptly as the most expert musician can express it by his voice, or by any instrument of which he may have made himself master. And so indelibly may the train of suggestions be fixed in the mind, that from childhood till the close of a long life may a few successive sounds of the tune recal the whole. In this phenomenon we have the germ of the facility acquired by habit in all operations, whether more apparently mental, or whether they be what are usually called—but, we believe, most erroneously called—mechanical.

It is a most important fact in regard to this faculty of memory, that the will has no control over it. The mind cannot by any effort deprive itself of its aptitude for remembering its sensations. It cannot change or modify any sensation, or succession of sensations, in remembering it. Such as it was originally, but more faintly, it will, if recalled by any of the laws of suggestion, recur to it again. It cannot forget any sensation, that is, it cannot deprive itself of its aptitude for having any sensation recalled by the operation of the laws of suggestion. It is as passive in this respect as a dáguerreotype plate is in receiving and retaining the images of the objects that are placed before it. Situated as we have supposed it to be, without power to move any muscle of the body, both its original sensations and its suggestions would take place, without any choice or any control over them. It is true, as we have seen, the suggestions would be regulated by the degree of attention paid to the original sensation. But we have also seen that that degree of attention itself would be regulated from without, and not from within the mind. Attention to any sensation would be excited by its own qualities or concomitants, as its intensity or novelty, or any circumstance exciting desire for the continuance or repetition of it; or even any circumstance exciting a desire to avoid the remembrance of it. For so entirely passive is the mind with regard to its remembrances, that the very desire to forget any sensation would have the effect of recalling it.

Another important fact relative to sensations and suggestions, or remembrances of them, is that, so far as we have proceeded in our investigation of facts, we have found nothing that could give rise to the notion of cause and effect in the mind. It has yet no conception of external objects causing sensations, and therefore could never derive any notion of cause and effect from that source. The only real cause and effect with which it is acquainted is an original sensation being the cause, in a certain sense, of the remembrance of it, since without the original sensation there could be no recal of it. But the remembrance is not called up by the original sensation, which is past and gone for ever, but by other sensations, and other suggestions, which other suggestions do not always recal the same remembrance, but any one out of a multitude; so that the fact of sensations or suggestions being followed by various remembrances, would convey to it no notion but of an uncertain succession. Or if the succession were more constant, as in our supposition of the sound of a drum regularly heard before daybreak, or the sound of a bell before nightfall, it never could infer from the succession that the sound of the drum was the cause of day, or the sound of the bell the cause of night. Or, although the sensation of light and heat should be continually experienced together, or immediately following one another, the mind, so far as we have examined it, could never connect them as cause and effect. To suppose that it should by intuition determine things to stand related to one another as cause and effect which are not so related, is gratuitously to suppose a system of falsehood and delusion to be interwoven in our very nature; than which nothing can be more revolting, as well to common sense, as to the only really philosophical account of the origin of our being. We conclude, therefore, that the notion of cause and effect could never be obtained by mere sensation under any possible modification of it.*

Yet it seems to be an original law of our nature—an instinct or propensity interwoven with our mental constitution—that the mind expects like consequents to follow like antecedents. An infant that has but once sucked the breast may be observed to turn its head into the position in which it enjoyed that pleasant sensation, and to form its lips into a round aperture, as when they enclosed the nipple, evidently expecting that the same posture would be followed by the same enjoyment, or, more generally, that the same antecedents would be followed by the same consequents; and it may be observed to express its disappointment, by signs of displeasure, when the expected result of its feeble exertions does not follow. It then discovers that something more is necessary to obtain the gratification than the position of the head and lips. That something else is supplied by the nipple being put into its mouth. If on another similar occasion the finger be put into the mouth, it will appear satisfied for a moment, and begin to suck it; but soon finding that it gets no milk, it again shows signs of disappointment, till after several trials it ceases to expect milk from the finger; and if it be intent on getting its natural food, it rejects it at once. Now here is a history antecedent to all experience, of that instinct or innate propensity that accompanies us through life, and by which much of our life is regulated, first confidently to expect the same consequents to follow the same antecedents, and afterwards gradually to disentangle by experience the necessary antecedent from unnecessary concomitants, and to distinguish the true antecedent from resemblances to it. A more advanced child makes a noise by striking a spoon on the table. He afterwards strikes it on a cushion, expecting to produce the same sound, but is disappointed. He tries it on the table again, and succeeds; and thus one error is corrected, and one part of the true antecedent is discovered; but his expectation that the same result will follow if he keep by the same means of obtaining it, is never for a moment weakened. A man makes a pump, and succeeds in drawing up water by it. He makes another, and fails. He immediately infers that there must be some difference between the second pump and the first, and sets himself to discover it, never doubting that if he made the second exactly like the first, and put it in the same circumstances, the same effect will be produced by it. This is an instinct, or intuitive propensity, in perfect accordance with the truth, which can never lead us into error, but which conducts us with absolute certainty, so far as we follow it up, to a true knowledge of all the objects to which we have access. It is common to us and to all the inferior animals, so far as their instincts have been observed: it is the great general principle on which our lives are regulated; it is the guide to all discoveries, and the germ of all true philosophy.

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* It has been asserted that every change necessarily implies a cause, so that we cannot even conceive of a change without a cause. The first part of the proposition we are not disposed to dispute, that every change must have a cause, at least when applied to created beings. But in regard to our necessarily inferring from every change that it must have a cause, we apprehend that such inference is derived from experience. Every change in material objects is produced by some cause, mental or material; every change in our own mind we can trace to some cause, and our constantly witnessing changes produced by causes begets a persuasion, which we cannot shake, that every change must have its cause. But in a mind circumstanced as we have supposed, destitute of the means of forming the conception of any object external to itself, any change within itself could be referred only to some cause within itself; and all changes within itself being alike involuntary, it possessing no power over them, we cannot imagine to what internal cause it could ascribe the changes of which it was conscious, or how it could obtain the notion of cause from them.

Memory necessarily implies the power of observing similarities and diversities in our sensations. There could be no such laws of suggestion as we have described, if all sensations appeared alike when suggested. It can only be by observing wherein succeeding sensations are similar to one another, or wherein they differ, that the mind can recognise them as repetitions of the same sensation, or discover them to be new sensations. If, in remembering sensations, the mind could not distinguish a sight from a sound, or one sight from another, or one sound from another, there could be no suggestion.

This observation leads us to notice another power of the mind, namely, the power of observing similarities and differences in its successive sensations, either original or suggested, or another phenomenon of the mind, that it in fact does notice resemblances and differences in its successive sensations or remembrances of sensations. This power of the mind may be called discernment or discrimination; or, as it is called by some writers, judgment. It can scarcely be regarded as a distinct power from memory, for the comparing of successive sensations implies memory; for, as we have seen, there could be no memory without it: yet, as a peculiar element in memory, it will require a separate consideration.

CHAPTER IV.

DISCERNMENT, DISCRIMINATION, OR JUDGMENT, AS DEPENDENT ON SENSATION.

The power designated by any one of these three names is, we have said, the power of discerning or judging of the resemblances or differences between an original sensation and a suggested one; or between two or more suggested sensations. For we apprehend there can be no comparison between two strictly contemporaneous sensations. To compare, the attention must be directed to both, and it can be directed to only one at a time; that is, it must compare by examining them alternately. The alternation may be exceedingly rapid, still it must alternate. When any one endeavours accurately to discern the difference between two sounds, as when he tunes a musical instrument, or between colours, as when he is endeavouring to match any colour, his attention is not directed to both of the sounds or of the colours at the same moment, but is continually passing from the one to the other, comparing the actual or original sensation of the one, with the suggested or remembered sensation of the other.

We use the words resemblances, or similarities, and differences, with the utmost latitude that the words will bear: similarities and differences in colour, smell, taste, sound, form, position, quantity, duration, number, and innumerable others. The nature and varieties of resemblances and differences which a mind situated as we have supposed would be capable of discerning, would be such as the following.

It might not at once, but would, perhaps, taught by experience,* distinguish sensations affecting it through the different organs of sense, sounds from sights, and both from feelings, or tastes, or smells. We are not sure that it would mark the distinction at once. The commonly reported case, indeed, of a blind man comparing red colours to the sound of a trumpet, was obviously derived from his connecting in his mind soldiers with red colour, having been told that their dress was red; and with the sound of a trumpet, that being a soldier's instrument. Had he been a Frenchman, he would probably have compared a blue colour to it, or if an Austrian, white. We remember a case more in point. A little boy was taken to a place of worship where the congregation joined with a loud voice in the psalmody. When they began to sing, he instantly turned his eyes to the door of the church, and when asked why he did so, replied that he thought it was a great A coming in at the door. He had been taught the sound of the letter A, which seemed to him to resemble the sound made in singing, and the loudness of it he mistook for the largeness of the letter. Here was a manifest confounding of a sensation of hearing with a sensation of sight.

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* See note C. Appendix.

Again, the mind would discriminate between many different sensations of the same organ—different sounds, shrill and deep, harsh and pleasing, loud and gentle; between different sights, light and darkness, various degrees of light, different colours, the diversities occasioned by different figures presented to the eye, or the same figure at different distances and in different positions; points, lines, straight or crooked, circles, ellipses, squares, triangles; different sensations of touch, hot, cold, hard, soft, light, heavy; feelings occasioned by rough or smooth bodies passed over the skin, sharp or blunt instruments applied to it. We question whether it would be able to distinguish sensation occasioned by the prick of a sharp point from that occasioned by a drop of scalding water, or the touch of fire or of caustic. It would also distinguish different tastes,—sour, sweet, bitter, nauseous, pleasant; and different smells,—fetid or fragrant, pungent or bland. It is to be remembered, however, that in its present supposed condition it could form no conception of the external causes of its sensations. It would be occupied solely with the sensations themselves, as in the mind itself, or rather as itself variously affected by them.

Still further, it would discern long-continued, from momentary, sensations; sensations of the same kind repeated several times, as the ringing of a bell; or different sensations regularly alternating with one another, as night and day. It would thus be able to discern, at least to some extent, differences and resemblances in regard to number and length of duration. The diversities of its visual sensations would probably enable it to discern differences and resemblances in regard to length and shortness of lines, between short and long, broad and narrow surfaces.

We have mentioned these differences and resemblances between successive sensations, original or suggested, which a mind situated according to our present hypothesis would be able to discern, not as an enumeration, but merely as specimens of them.

This discernment of differences and resemblances between different sensations, either original or remembered, affords a pleasure peculiar to itself, and altogether different from the pleasure that may enter as an element into any particular sensation. Different minds seem to be differently constituted in this respect. Some minds attend most to the pleasure that forms an element in the original sensation, and are most gratified with this; and some are most gratified with the pleasure that is derived from comparing a sensation with other sensations, and marking their differences or resemblances, and attend most to these. Different minds also seem to have a natural aptitude for observing different classes of resemblances or differences; some have most pleasure in discerning differences and similarities of sounds; some of colours; some of tastes and smells; and some of feelings. Whether the phrenological theory comes again into play in creating or influencing these different capacities of different minds, in regard to the nature of the pleasure which they enjoy from their sensations, we feel ourselves incompetent to form an opinion, and must again leave the subject in the hands of physiologists. It is obvious, however, whatever may be the cause of these different capacities of different minds for enjoyment, and consequently their different tendencies, they may be the embryo of those diversities of pursuit and occupation which distinguish different individuals. We shall probably have occasion to return to this subject.

In the pleasure or pain which enter as elements into our sensations, and also in the pleasure that we derive from discriminating between them, and marking their resemblances and differences, we have the basis of all the emotions or passions, or, as they are sometimes called, the active powers of the mind. In the power itself of discriminating or judging of the resemblances and differences among our sensations, we have the germ of all its intellectual faculties or exercises. This observation will come more prominently forward as we proceed with our demonstration.

Meanwhile, we have to extend an observation formerly made in regard to original sensations—to the remembrance of sensations; namely, that the pain or pleasure occasioned by any sensation, not only loses much of its intensity when recalled by the exercise of memory, but that the pain or pleasure attending it abates on every repetition of the remembrance of it. Sensations, the first remembrance of which filled us with delight, or overpowered us with agony, gradually lose their effect of moving us. The most heart-rending and best-performed tragedies, which were, on first seeing them performed, quite overpowering, lose that power on being frequently seen; so that we are disposed to laugh at the tears of those who witness them for the first time. The most ludicrous comic exhibitions also cease to excite laughter when they are frequently witnessed. Hence, also, the disgust that we feel at hearing often-repeated jokes or witticisms; they become stale, to use an expressive epithet usually applied to them.

But while the mind thus gradually becomes indifferent to the pleasure or pain, which it derived from sensations on first experiencing them, by the repetition of them, or the repetition of the remembrance of them, every repetition of them makes the mind more perfectly acquainted with them, and the more accurate and prompt in discerning their differences or their resemblances. A tuner of musical instruments loses the pleasure which he originally received from musical sounds, but his ear becomes more acute in discriminating between them. So a perfumer and a cook, with respect to smells and tastes, and a painter or dyer, with respect to colours, loses the pleasure which the sensations with which he is most conversant originally yielded to him; but he becomes the more adroit in discerning their similarities and differences.

The pleasure which we have said accompanies the discernment of resemblances or differences among our sensations, follows the general law of pleasure or pain, and on repetition sinks into indifference. But it has in itself the means of longer duration than the pleasure or pain which formed elements in the original sensations, or in the remembrance of them. The discernment of those relations of difference or resemblance becoming more accurate by repetition, and every new resemblance or difference affording new pleasure, a provision is thus made for the constant renewal of this description of pleasure; while there is no such provision for the renewal of the pleasure derived from sensations irrespective of their relations to one another.

Thus the two elements of sensations, and the remembrances of them, namely, the pleasure or pain of them, and the power of discerning their differences or resemblances, diverge on the prolongation or repetition of them, and follow two opposite courses. The pleasure or pain subsides and sinks into indifference, but the discernment of their relations becomes more acute and perfect; and although the pleasure derived from discerning the resemblances or differences of sensations also sinks into indifference, yet the discernment becoming more exact by repetition, every repetition may cause a new pleasure by disclosing some new resemblance or difference; and this increase of the power and exercise of discrimination seems to have no limit. For the sensation, or revival of a sensation, being often repeated, and necessarily repeated in various connections and sequences, is brought into comparison with a never-ending variety of other sensations; and its resemblances to all of them or differences from them discovered, there seem to be no bounds to the accuracy and extent of discrimination, and consequently to the pleasure derived from the exercise of it.

It will be readily anticipated by an attentive and intelligent reader, that these phenomena respecting the pleasure or pain forming elements of sensations—its passing away on repetition, also the fading of the pleasure derived from discerning any resemblances or differences between sensations, together with the unlimited power of the mind to discover these relations—are phenomena of the utmost importance in the human constitution. We have already hinted that the pleasure or pain connected with sensations, or with discernments of differences or resemblances between sensations, lies at the foundation of all the emotions or passions; while the power of discerning resemblances or differences among our sensations, and the pleasure which such discernments afford, is the basis of our intellectual powers and exercises, and the delight which they yield to us.

The gradual abating of the pleasure derived from any sensation, or from the discovery of any resemblances or differences between sensations, lies at the foundation of the great principle of curiosity or love of novelty, which performs so important a part in the history of our species.

The unlimited power of the mind to discern resemblances and differences, and the pleasure attached to every such new discernment, explains also the superiority of intellectual to sensual pursuits. The man who seeks his enjoyments in the original pleasure of sensation is soon sated. Every such pleasure fades on repetition, and his variety is very limited. His enjoyments soon become nothing better than the momentary allaying of pain, which he has brought on himself by sensual indulgence; whereas intellectual enjoyments possess an inexhaustible fountain of pleasures in the endless variety of objects around us, each affecting the organs of sense in a manner peculiar to itself, and different from all other objects. This principle will be more fully developed in the sequel.

We are now brought up to a division of the powers, or rather phenomena, of the mind which must influence the whole of our future investigations, namely, the emotions or passions founded on the pleasure or pain which enter as elements into our sensations, or which are derived from the exercise of discrimination or judgment on the one hand, and the intellectual processes which are founded on the power of discerning resemblances and differences in our sensations on the other. This division corresponds pretty nearly to the division into the active and intellectual powers of some metaphysicians. After some hesitation we assign the precedence to emotions, as springing most directly from our sensations themselves, and not from their relations to one another.

CHAPTER V.

EMOTIONS DERIVED FROM SENSATIONS.

WE still suppose the mind to be lodged in an immoveable tenement—a body with organs of sense open to the influence of external objects, but totally destitute of power over the body—and proceed to consider of what emotions or passions it would be capable in such circumstances.

The mind after experiencing a pleasant sensation would naturally desire or wish for the repetition of it; and after a painful sensation, it would as certainly experience dislike or aversion; and the desire in the one case, and the dislike in the other, would be proportioned to the intensity of the pleasure or the pain. Here we have the germ of the emotions of DESIRE and AVERSION.

If the pleasant sensation were experienced more than once, after a series of sensations more or less numerous, then the entering on the series, which had repeatedly ended in a pleasant sensation, would excite *hope* or *expectation*, more or less confident in proportion to its familiarity of the series of sensations that preceded it, and more or less ardent in proportion to the intensity of the expected pleasure. This expectation or hope would be excited by the innate propensity, which we have found to be a part of our nature, to expect similar consequents from similar antecedents. If, on the other hand, a painful sensation had more than once followed the same series of sensations, then through the operations of the same innate propensity, the commencement of the series would excite *fear* or *terror*, proportioned partly to the number of times that the series ending in pain had been experienced, and partly to the intensity of the pain with which the series had ended. On every repetition of a series of sensations ending in pain or pleasure, the expectation of the result would become more confident, but the intensity of the hope or the dread would become more faint, in consequence of the tendency of any pleasure or pain towards indifference on repetition. Here we have the emotion, HOPE, and a more advanced state of the emotion, FEAR.

If a series of sensations which had on former occasions ended in a pleasant sensation, should pass away without the accustomed pleasant sensation, the effect would necessarily be *disappointment* or *sorrow;* and if a series of sensations, which had on former occasions ended in a painful sensation, should pass away without the accustomed pain, the effect would be *joy*. If instead of the expected pleasant sensation, a painful one should close the series; or if instead of the dreaded painful sensation the series should close with a pleasant one, then the sorrow and the joy respectively would be heightened by surprise. If the series which was expected to end in a pleasant or painful sensation were broken off before it came to its usual conclusion, the result would be similar, disappointment or gratulation. If either of such series had been often repeated, so that the suggestion and expectation of the result had become prompt and confident, then the sorrow in the one case, and the joy in the other, would be accompanied with PERPLEXITY.

If a series of painful sensations should on several occasions end in a pleasant sensation, then the suggestion and expectation excited towards the commencement of the series would diminish the pain of the preceding part of the series. Hope would mitigate, perhaps triumph over, pain, by entirely reconciling the mind to it. Whereas, if a series of pleasant sensations were connected in the mind with a very painful sensation coming at the conclusion of it, the approach of the dreaded painful sensation would poison the pleasure of the preceding series, and cause the entering on the series to be regarded with horror. Fear would thus temper, perhaps overcome, enjoyment.

When any sensation is experienced for the first time, if it be a pleasant sensation, the effect is ADMIRATION. The effect of mere novelty in a sensation is wonder, amazement, astonishment, the intensity of which is proportioned to the degree of novelty; that is, to the extent to which it differs from all former sensations. Suppose that the eyes of any child were kept closed, as by disease, till it had become familiar with the sensations derived from the other senses; and then opened,—the effect would be wonder, amazement, astonishment, all of which words signify different degrees and modifications of the effect of novelty on the mind. If the new sensation were a pleasant one, it would excite ADMIRATION proportioned to the pleasure experienced from it, even to ecstasy. If the sensation were a painful one, it would produce an effect for which we remember no name in the English language more exact than wonder, or amazement, or astonishment. We might probably express it by such a circumlocution as mingled pain or horror, and astonishment.

If any mind were so constituted, or so affected by any cause (which it might be by bodily disease), as to have painful sensations most readily and frequently suggested, the effect would be MELANCHOLY, or prolonged SADNESS, proportioned in intensity to the painfulness of the suggested sensations and the frequency of their recurrence. If, on the contrary, a mind were so constituted or so affected, that pleasant sensations were most readily and frequently suggested, the effect would be CHEERFULNESS.

We have yet found no emotion that depends on the knowledge of any being external to the mind, or other than the mind itself, such as love or hatred, anger or gratitude. These emotions belong to a higher state of existence than that which we are now contemplating.

Nor have we found any emotion that implies *will.* By the *will* we understand the power of the mind to choose or select the power to do, or to leave undone—to accept or to reject. Some, by the *will*, understand our emotions as distinguished from our intellectual operations, the emotions being sometimes called the powers of the will. But we regard this as a mere abuse of language, for the purpose of supporting a hypothesis. The power of the will is the mind's power to accept or reject—to do or not to do. When there is no such power, there can be no act of the will. Now we have no direct power over the feelings or operations of the mind. We cannot by an act of will create a sensation, nor recal a past sensation, nor alter the pain or the pleasure of any sensation. We cannot love or hate what or whom we choose. We cannot be angry by an act of will, nor bid away our anger. We may swallow wormwood, but we cannot, by an act of will, love it. We may abstain from doing that which anger or hatred would prompt us to do, but we cannot bid these emotions away by the fiat of our will. We may obtain much influence in regulating our sensations and remembrances, but that is always by the influence which the mind possesses over the body, and not by any direct power over the mind itself. The will is distinguished from desire by the consciousness of power to do, or to obtain what is desired. I desire to get hold of an object within my reach; but if I be conscious that I have lost the power of my arm, I cannot will it. Astronomers desire to know more of the moon than we do, as they indicate by availing themselves of instruments to enable them to see it more distinctly. But no one can be said to will to know more of the moon than his present opportunities enable him to know. Now, regarding this as the distinction between will and desire, we say that although we have found in a mind destitute (according to our hypothesis) of power to produce motion of any kind, room for desire, we can find none for volition, or for any emotion that implies volition, such, for example, as patience or impatience. Such emotions also belong to a higher state of existence.

The mind, it is true, would naturally prefer sensations and remembrances that were pleasant to those that were unpleasant. But, as in its supposed condition it could have no power to procure the repetition of pleasant sensations, so it could have none to prolong them, nor to call up the remembrance of them. To suppose it could recal a sensation at will involves an absurdity; for it supposes it to be previously present, in order to will its recal. The revival or recal of sensation; we have seen, is regulated by the laws of suggestion, one sensation or remembrance of a sensation calling up the remembrance of another.

We have seen, however, that the current of remembrances would be regulated partly by the state of the mind itself, that the suggestions of one mind would follow one course, and of another mind another course. Any high enjoyment or great pain connected with a sensation, would have the effect of suggesting it. Desire, also, connected with a sensation, fixes the attention upon it to the exclusion of others; so that although the mind would have no direct choice in determining its suggestions, yet its predilection for one class of sensations above others, and its desire of that class, would tend to the more frequent remembrance of it, and would fix the attention upon it as often as it was experienced or recalled. Those qualities, therefore, of sensations which we have noticed as fitted to attract attention, and to excite desire for them, would have much influence upon the train of suggestions, and consequently upon the whole character of the mind. And, as we have seen that some minds, from their original constitution, or from the state of the body with which they are connected, are more attracted by one class of sensations or remembrances than another—some more attracted by the pleasures of sensation, and some by the pleasures of observing the resemblances and differences among sensations—there might be room in different minds, circumstanced as we have supposed, for great variety of character. The thoughts of one might run more on sensual pleasures or pains; of another more on intellectual enjoyments. Of the sensualists, one might give more attention to sounds, another to sights, another to tastes, another to smells, another to feelings; while of the more intellectual minds, one might be more attracted by the differences and resemblances of visual sensations, another of sensations of hearing; and another, feelings, and so of the other sensations; another to differences of form; another to differences of number; another to differences of prolongation, or of time. But although these differences may originate in the state of the mind, they obviously are not under the power of the will.

CHAPTER VI.

INTELLECTUAL POWERS, OR PHENOMENA DEPENDENT ON SENSATION.

We have regarded the faculty, or power, or phenomenon of sensation as forming the basis of all mental phenomena, and therefore having a common connection with all.

We have regarded *memory* also as being the recalling or reviving of sensations, with certain modifications, according to certain laws, called laws of suggestion; also as bearing a common relation to all mental phenomena.

To these we have added *attention*, regarding it not properly as a distinct faculty from sensation and memory, but as a limit set to the mind's powers of sensation and memory, rendering it incapable of noticing more than one sensation, or recalled sensation, at the same instant; and so also with regard at least to those sensations, or remembrances of sensations, of which it is conscious, confining them to a single train of successive sensations or remembrances.

We have, further, regarded sensations and revivals of past sensations by memory, as consisting of two elements, or at least as capable of being contemplated in two points of view; namely, 1st, as being pleasant or painful: and, 2nd, as differing from or resembling one another. And we have regarded the element of pleasure or pain in sensations as the foundation of those powers or phenomena of the mind called emotions or passions; and the resemblances and differences among sensations, original or recalled, as the basis of the intellectual powers or phenomena of the mind; and the power of the mind to discern these resemblances or differences we have regarded as an element both of sensation and memory, and therefore as holding the same common relation to all mental phenomena with sensation and memory. Although, therefore, the act of the mind in observing the resemblances or differences of sensations, original or remembered, has in it more of the nature of intellect than of emotion, just as the experiencing of the pain or pleasure of sensations, original or remembered, has in it more of the nature of emotion than of intellect; nay, though the one may be regarded as a pure exercise of intellect, and the other as a pure emotion, yet, having regarded both of these classes of phenomena as elements of sensation and memory, we have treated them under these heads. We shall not, therefore, repeat what we have advanced respecting judgment, or discrimination, or discernment, under the heads of sensation and memory; nor add anything to it, but proceed to the consideration of other intellectual operations connected with sensation.

Would a human mind, circumstanced according to our hypothesis, make any progress in classing its sensations? We see no reason to doubt that it would. It might learn to class them according to the organs of sense through which it received them. It is probable, we conceive, that the accurate distinguishing of sounds from sights, or smells, or tastes, or feelings, and all of these from one another, would not be effected at once; but we conceive it might be learned by frequent observation.

Or it might adopt another classification, and, disregarding the organs of sense, arrange them as being pleasant, or painful, or indifferent, or by the nature and intensity of the pleasure or pain involved in them. That a mind conversant only with sensations might class them according to the pleasure or pain involved in them, irrespective of the particular organ through which the sensations are conveyed to it, seems probable from the facility with which we apply epithets to sensations of one sense properly applicable to sensations of other senses. Thus, we speak familiarly, and are clearly understood, when we speak of *sweet* sounds or perfumes, *harmonious* colouring, *bitter* cold, *soft* shades, *splendid* music, *grating* sounds, *harsh* tastes, *hot*, *warm*, *cool*, *cold*, *freezing* looks or language, and innumerable others. Many of the effects produced by the sensations of different senses are strikingly analogous. A pure, clear, musical sound, and a pure, clear, simple colour; the thrilling sensation produced by two sounds in harmony, especially thirds, and the mingling of any two of the primary colours (red, blue and yellow), the successive sounding of the three sounds of the triad, or common chord, and the successive displaying of the three primary colours; the sounding of the seven notes of the scale in regular succession, and the appearance of the seven prismatic colours; the discordant effect of the sounding of all the notes of the scale, and the disagreeable effect of the artificial mixing of all the prismatic colours; the natural blending of all the sounds in the scale in the clear tone of a bell, or of a musical string, and the natural blending of all the prismatic colours forming white light, are so similar in their effects, that we suppose that the attention of the human mind, might be as much attracted by these analogies as by the different organs of sense through which its sensations reach it. It might, perhaps, also class visual sensations, having in them distinct forms, according to these forms—lines straight or curved, long or short; lines returning into themselves without angles, as circles, or ellipses; or with angles, as triangles, squares, parallelograms; by which we mean the appearances which lines in these forms would have when held distinctly before the eye. Would the mind form any conception of number? Would it observe that three points of light, three successive sounds, and three impulses on the sense of touch, were similar, in having the number three common to all? We see no reason to doubt that it would. Here, then, we have the germ of classification, and of reasoning so far as that operation is employed about classification.

Would a human mind, in the condition of our hypothesis, make any effort in the direction of drawing inferences? Would it form any idea of a whole constituted of two or more parts? Would it observe that a square, that is, the appearance which a square would have when presented directly before the eye, consists of four equal lines; or that three lines are required to make one triangle? If a circle were divided into three parts, coloured respectively red, blue, and yellow, would it discern that each of these pieces of breadths of colour were parts of one whole circle? If it were accustomed to hear three tolls of a bell before sunset, and if it heard two such tolls, would it regard them as parts of the whole signal by which night was ushered in, and expect the third toll? and if the third toll were not heard, would it expect or not expect the sensation of darkness to follow? If a square were presented before it, divided into equal parallelograms by a line drawn within it parallel to two of the sides, and divided also into two equal triangles by a diagonal, would it ever discover that the triangles were equal to the parallelograms, as both occupying the whole square, and that each of the triangles was equal to each of the parallelograms, both being halves of the same square? We do not see on what grounds such a discovery should be regarded as beyond the powers of a human mind, although conversant only with sensations and the remembrance of them. And if the mind were capable, in these circumstances, of such operations and inferences, it would possess the embryo of all reasoning.

Such is the human mind in the elements of its noble faculties;—lying passively in its corporeal residence, but open to external influences through the apertures of the organs of sense, yet the fixed eye and immoveable features, conveying to it no intimation of the world without, it is a very interesting object of contemplation. Shut up in its lonely tenement, hid from every eye but the eye of Him who can commune directly with the spirit, it is yet a little world within itself. It has its own pleasures and pains, its desires and aversions, its hopes and its fears, its joys and its sorrows, its pleasant surprises and its disappointments, its admirations and wonderings, perhaps its melancholy and its cheerful moods. It has also its acute observations of resemblances and differences among the objects of its thoughts, perhaps its classifications and its inferences, with the pleasures which these intellectual operations yield. But we are now to introduce it to new scenes, and vest it with new powers, and observe how its faculties, which we have contemplated in their embryo or chrysalis state, develop themselves. The reader is not indeed to suppose that the mind ever actually exists in the condition that we have imagined for it. From the moment of birth, it possesses the command of the voluntary movements of the body, and this power we shall see opens to it, from the commencement of its career, a range of activity from which, by our hypothesis, it was altogether excluded. We have placed it in its hypothetical imprisonment, not as forming a portion of the actual history of any human being, but solely that we might the more easily disentangle the elements of its powers from their more complicated phenomena.

END OF BOOK I.

BOOK II.

PERCEPTION, AND THE PHENOMENA DEPENDENT UPON IT.

We are now to raise the mind, which we have been contemplating, to a higher stage of existence than that which our hypothesis has assigned to it, and to open to it a wider field for the exercise of its faculties. The step by which this is to be effected, is giving it such command of the movements of the body, in which it resides, as we possess,—a power over those of its motions which are called voluntary motions, as distinguished from those motions which proceed independently of its will.

An infant, from its birth, and independently of all experience, moves those members of its body which are under the control of its will, wittingly. It stretches out its hand, or its foot, and draws it in again, conscious of what it does. This is rendered evident by the fact which we have formerly noticed, that an infant which has once sucked the breast in a reclining posture, will turn its head to the same side on which it lay when it first enjoyed its natural beverage, and form its lips into a round aperture as when they enclosed the nipple, as an indication of its desire of a repetition of the same enjoyment, and of its expectation of receiving it when it was in the same posture. We have observed a very young infant, we dare not say how few weeks old for we took no note of it, bring his hand over an itching sore behind his ear, manifesting how early he had acquired the power of directing his hand wittingly, and his knowledge of the direction in which the sore lay that was annoying him. We conceive it unnecessary to offer any further proof of the fact, that from our earliest infancy, independently of all reasoning and of all inferences from experiment, we move those members of the body which are placed under the control of the mind designedly, and conscious of what we do. Now this fact in our constitution produces the most important results. It is not necessary, indeed, to these results, that this consciousness of power over the muscles of the body, should be innate; it is manifest that it is very early acquired, and all that is necessary for our purpose is that we come to possess it. We proceed to describe the immediate results of this power.

CHAPTER I.

PERCEPTION.

We have seen that no conception or notion of anything external to the mind could have been communicated by mere sensation. In the state which in the former book we supposed it to be placed, it was exposed to various influences from the external world through the senses; but it never, in that condition, could have discovered that there was an external world. Its sensations would in such circumstances come and go, but it could never discover how or from what cause; and they would leave behind them some effect, some impression, as it is figuratively called, that would cause them to be revived in the mind under certain circumstances, and to lay the foundation of many interesting operations, but all without any conception of objects external to itself, which gave beginning to these sensations and operations.

How, then, does the mind acquire its knowledge of external objects? The first, and, in some sense, natural supposition is, that the senses discern these objects,—hear, see, taste, smell, feel them; just as it is the first and natural account that we give of the vicissitudes of day and night, that the sun rises in the east, and passes over to the west; and there sinks beneath the horizon. As more accurate observation, however, has discovered that the sun does not rise nor set, but that its appearing to do so arises from the motion of the earth, so it has been discovered that we hear, see, taste, smell, and feel, only our own sensations, and not the external things that cause the sensations; and that our inferring the existence of external objects from our sensations is the result of experience. Some of the ancient philosophers imagined that all external objects gave out certain subtile emanations, images of themselves, which they called ideas, which entered the organs of sense, and by means of which ideas the mind perceived the external objects. That theory has been long abandoned. More recently, it has been thought that the notion of external objects was conveyed by the sense of touch, and that the mind intuitively inferred the existence, and what have been called the primary qualities, of objects, such as extension, form, &c., from the sensations received by this sense. We have seen, however, that the sense of touch would not of itself convey this notion, any more than any of the other senses; yet this sense is more nearly connected with the discovery of external objects than any or all of the other senses.

The following seems to be the history of this most important of all discoveries.

The infant has power to move various parts of its body. We shall confine ourselves at present to the hands. In stretching out his hand, he encounters resistance; he draws it in, stretches it out again, and is stopped by the same resistance: this conveys the idea of a vacant space and something beyond it.* He draws in his hand and touches some part of his own body; here he meets resistance as before, but there is now a double sensation, the sensation from the nerves of his hand, and the sensation from those of the part of the body which his hand touched. By repeated experiments of this kind, he learns to distinguish between his own body and other objects, and also to know that other objects may be at some distance from him—that there is a vacant space between him and them. He grasps some object, and finds himself resisted in attempting to shut his hand; he opens his hand, the object that he grasped is removed; he shuts it again, and finds no resistance till he meets part of his own hand, which he learns to distinguish from the extraneous object by the double sensation. He lays his hand on a hard substance, and finds himself peremptorily prevented from moving it farther in that direction; but he finds that he can move it along the surface of a hard object to the right or left, forward or backward, till he comes to the ends or sides of it, and then the resistance ceases at once, and his hand drops; he lifts it, finds the object again, moves his hand over it till he gets to the edges of it, and thus has a kind of rough measurement of the extent of its surface in various directions. As he proceeds with his investigations, he

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* Some metaphysicians suppose that space is a notion in the mind anterior to all experience, that when an infant stretches out his hand he is conscious that the movement is in space. We are not disposed

very keenly to dispute what may be in the mind of an infant, but only say, that, having weighed the arguments for that opinion, as far as we could understand them, we are not convinced by them, and still believe that our notion of space is the result of experience. We must admit, however, that the notion of space may be, as Sir William Hamilton distinguishes, although not *innate*, yet *native*. The infant moves in the womb; are its motions voluntary, and is it conscious of these motions being in any particular direction? If so, it must receive the notions of matter and space there. Are its motions arrested by the parietes of its receptacle, and is it conscious of their being so arrested? Then it may be born with the conception of a *non ego*, or something different from itself. Still we should conceive it more probable that the notion of matter, space, and a *non ego*, is derived from its voluntary motions, than that it has an innate notion of space, and moves its limbs, in consequence of that innate notion, in a certain direction. For a notice of Kant's inferences from what he regards as necessary cognitions or modes of thought, we refer to Note B in the Appendix.

follows the course of the edges, till he obtains some notion of the form of it. He lays his hand on a soft substance: it resists him; but he finds that, unlike the hard substance, it yields to his pressure, and thus gets the idea of hard and soft. He touches something cold or warm, and thus is furnished with the information that some external objects are warm and some cold.

Meanwhile, he is learning the use of his eyes, and is wonderfully aided by them in his discoveries. He finds out, in turning his eyes in different directions, that he changes the sensations he receives from them: that by fixing them in one direction, he prolongs a sensation; that when he turns them away the sensation ceases; when he brings them back to the same position, the sensation is renewed. Having mastered the achievement of directing his eyes and his hands to the same point, he begins to connect his sensations of sight with those of touch. He finds that objects which have different forms, as ascertained by handling them, have also different appearances; that when he holds anything in his hand and brings it near his eye, it looks large; and that when he stretches his hand away from his eye, it looks small; that when he turns the object in his hand in one direction, it has one appearance, and when he turns it in another direction the appearance altogether changes; and thus, by incessant trials, he gradually learns to distinguish the various notices given by the sense of sight of the forms, positions and distances of the various objects that come within the reach of his investigations.

As his powers of motion extend, his knowledge of distances increases. He sees a glittering object when his eyes look in a certain direction; he stretches out his hand in the same direction, but cannot reach it; he stretches his whole body towards it, and does reach it. On a similar occasion he continues to move his whole body towards it, and, after an arduous struggle, gets hold of it. He has now discovered an important secret, and when he sees such an object which he finds he cannot reach, he appeals for help, and insists on being moved towards it, or on its being brought nearer to him. His eyes are thus gradually acquiring facility in judging of the distance of objects.

As he acquires the power of moving himself along the floor, his sensations of touch and sight become more perfectly corrected to one another; till a glance of any known object in its various distances, positions, lights, and shades, instantly intimates to him what it is, how far off it is, in what direction, and in what position it is. His other senses also come to aid him in his inquiries. His mother, or nurse, becomes known to him, not only by sight and touch, but also by the sound of her voice and her smell; and he gradually learns to recognise her by the eye, at various distances, and in various attitudes and positions.

When the mind is fully possessed with the belief that the sensations of sight and touch come from without, it learns to apply the same principle to sensations from the other senses, and to become equally persuaded that sounds and smells come from without also; and which persuasion it finds, in ordinary cases, confirmed by fact. In regard to tastes, the manner in which we receive them, and the sense of touch that accompanies them constrain us to ascribe them to external objects, as soon as we know that there are external objects. We at length become so fully possessed with the persuasion that all our sensations are caused by external objects, that we become prone to carry the persuasion beyond the truth; and when we experience a sensation of ringing in the ears by some derangement of the organ itself, we ascribe it to a ringing of bells; or if, from disease in the brain, visual sensations are recalled with unusual vivacity, as in delirium tremens, the patient imagines that he is looking at external objects.

The reader is not to imagine that we have attempted to trace the exact process, in order, by which the mind of every infant becomes acquainted with external objects; for that must be as various as the various circumstances in which every infant is placed. In some the process may be more slow, in others more rapid. The order of discovery may be different in different minds; but in all there must be processes such as we have described. And to one accustomed to observe infants, the effect of these processes may often be detected. The long, attentive gaze, followed by a smile or chuckle of delight, indicates some pleasant discovery, or the consciousness of some new achievement. The eye following a candle, or other bright object, losing it by looking in another direction, and intimating the loss by a whimper or a tear, recovering it again by looking in the proper direction, and hailing it with a laugh of complacency; the eyes intently looking in a particular direction, and the hand stretched out in the same direction, and touching or laying hold on some object that had arrested its attention; the careful examination that it may sometimes be seen making of its own fingers, holding them up, turning them round, shutting, opening them, with its eyes all the while intently fixed on them, are all indications of the mind vigorously engaged in acquiring the elements of knowledge.

The cognition of the external world thus obtained by means of sensation and muscular effort we call PERCEPTION, or the perceiving of the existence and qualities of external objects.

Much subtlety has been expended on this subject, which we do not feel ourselves called upon to detail. Some of the ancients, as we have already mentioned, imagined that we perceived external objects by means of species or ideas, which emanated from all objects, entered the mind by the senses, and so produced perception. More modern metaphysicians then inferred that if we perceived nothing but what was in the mind, we had no evidence of the existence of anything but the ideas in the mind, and that we had no reason to believe there was any external world, but rather the contrary. Then came David Hume, and irresistibly proved that if this were the state of matters, there is no evidence for the existence of anything, even the mind itself, and its ideas. These startling conclusions drew the attention of Dr. Thomas Reid, and others after him, to the whole theory, of perception being effected by means of species or ideas, and led them to assert that our inferring the existence and qualities of external objects from the sensations of touch was intuitive—a part of our constitution of which we could not divest ourselves, that it was anterior to all reasoning, and therefore could never be proved by reasoning. Dr. Brown, the successor of Dugald Stewart, has traced the discovery of external objects to the sense of touch combined with conscious muscular movement; and the inference of the existence of external things from these two phenomena of the mind,—namely, tactile sensations, combined with the conscious movement of the limbs in various directions—is so direct and so necessary to us, that if any infant should not make these inferences, and so should not become acquainted with external objects, it would remain an idiot. It seems to be a sufficient penalty on the rejection of an external world, or the entertaining of any serious practical doubts of its existence, that any man who should do so, would, in his search after philosophy, deprive himself of his reason, and effectually qualify himself for a lunatic asylum.

CHAPTER II.

NOTION OF SELF, OR PERSONAL IDENTITY.

When the mind, according to our first hypothesis, was, in consequence of its want of power to move any part of the body, destitute of the means of discovering the existence of anything external to itself, it could form no conception of any being other than itself. Its own sensations, and its ruminations of them, with the pains and pleasures, the hopes and fears, the joys and sorrows, the pleasant surprises and the disappointments of which it was the subject, constituted the whole universe to it. But when, by the power of moving the body, combined with the sense of touch, it acquired the knowledge of the existence and qualities of beings external to itself, it necessarily acquired, at the same time, the notion of *myself*, or of its own personal identity.

Personal identity may either be regarded as the distinction of self from other beings at any given moment, or the identity of self at different periods of existence; or, in other words, personal identity as distinguished from other beings without regard to time, and personal identity with regard to continued duration. There is also another distinction that requires to be attended to,—namely, on the one hand my personal identity as it is apprehended by others, or the personal identity of others as apprehended by me, and on the other, personal identity as it is apprehended by the person himself who apprehends it,—that is, the notion of thyself or himself, and the notion of myself.

With respect to my own identification of myself from others at the present moment, it depends on the body, through which exclusively my mind is affected, and over which my mind has direct power. Every sensitive part of my body, and every member of my body over which my will has power (and as, by means of my power of locomotion, I can move my whole body), that sensitive controllable body, with the mind that is affected through its organs of sense, and that controls it, forms myself. I see other objects touching other animate or inanimate beings, but I receive no sensation, these are not myself. I see danger approaching another person which he should avoid, but I cannot, by the act of my will, move his limbs as I could my own, to carry him out of the way of it. That person is not myself.

With respect to prolonged identity, or the knowledge that I am now the same person that I was in all former parts of my history, that depends partly on the consciousness that my body is the same, the same medium of sensation, the same organs of sense, the same limbs which I have commanded and used for my purposes all my life. Whether it be the same matter or not does not enter into the question. It is its being the same organisation, although, according to that organisation, it may have been continually changing the matter of which it is composed. An oak does not consist of the same matter as it did when, as an acorn, it was planted in the earth. Yet, to one who had observed it from the moment that it began to appear above the ground till it became a great tree, it would be the same, because its organisation had never been changed. So a human body is the same, from its embryo in the womb, through all the stages of its growth—infancy, childhood, youth, manhood, old age; because it has been throughout its history the same organisation. It is the same to-day that it was yesterday, the same yesterday that it was the day before; and so, tracing it backwards to its origin, no day could be found on which it could be said, this is not the same body that it was yesterday. The germ therefore of the organisation of the body may be so minute as to be indestructible, and its organisation may, after death, still exist, and be perfectly known to Him who made it.

But my sense of personal identity depends chiefly on my remembrances. I am the same person who have been affected so and so, or who have done so and so, which effects and acts are recorded in my memory. If my sensations or perceptions, after affecting me for the moment, should pass away, and could never be recalled, as if they had been objects passing before a mirror, leaving no trace of themselves, I could have no consciousness of prolonged personal identity. But myself is my mind, with its store of remembrances accumulated during my whole life; or, rather, my mind, with its aptitude for having its series of past sensations and perceptions, emotions and acts of its will, and its past ruminations of them, recalled to me.

My prolonged identity, in the view of other persons, depends on the identity of my body from the time that they became acquainted with me, connected with what they have known of my history. They judge my body to be the same by its organisation being the same, as I should judge of an oak being the same from its first appearance above ground, till its becoming a lofty tree; and that judgment they connect with what they remember of my history, my sayings and doings, and sufferings. Thus my own personal identification from my childhood till now depends on my own remembrance of my history; and commences with the commencement of those remembrances. My personal identification, in the estimate of others, depends on what they remember respecting me; and commences also with the first of those remembrances; to which is added, day by day, or year by year, their further acquaintance with my history recorded in their own memories.

CHAPTER III.

THE WILL.

By the *will*, we understand the power of the mind to *choose* or *refuse*. An act of the will is an act of choice. This is the definition adopted by Edwards, and we would only add this explanation that it is a power of immediate effective choice; and not a mere preference, or desire, or wish, which we have not power to gratify.

The very first effect of the change which we have made in the hypothetic circumstances of the mind, by furnishing it with a human body, and that amount of power over its motions which the mind of man possesses, is the exercise of a WILL. In its former state, it had no power, and therefore no will; for we have seen that, although there may be *desire* where there is no power, there cannot be will. Now, by our former hypothesis, the mind had no power over the body, and having no power over the body, it had no power over its own operations. It could not procure the repetition or prolongation of a sensation, nor could it command the remembrance of a former sensation. These remembrances or revivals of sensations in the mind itself we saw were regulated by certain laws called the laws of suggestion, over which the mind had no direct power. We saw that a necessity was imposed upon it of attending only to one sensation or reminiscence at a time, and that the preference given to any sensation or reminiscence was determined not by any act of the mind, but by some quality or relation in the sensation or reminiscence. We saw that when the attention was directed to any sensation, or remembrance of a sensation, by a desire existing in the mind itself to examine it, that desire was excited by some quality in the sensation or reminiscence, or by its relation to other sensations or reminiscences. We saw, also, that the pleasure or the pain of sensations was equally beyond the power of the will; that it could not love nor hate, according to the dictates of the will. But now that the mind has a body, over the movements of which it possesses a certain control, it has attained to the exercise of a will; because, when it chooses, it can move the hand, or the foot, the head, the eye, the lips, the tongue, in one direction or another. Here it has absolute control. The obedience to it by those muscles to which the power of the will extends, is prompt and perfect, to the full extent of their strength and liberty.

Here is the dominion of the mind, and its only direct dominion. It can move its own limbs, its arms, its legs (that is, its own by possession and command), the trunk of its body, its head, its eyes, its tongue, and the muscles of its face, all within certain limits. It can also, by moving the members of its body, move other bodies. It can grasp, and push, and draw, lift up, and let down other objects within certain prescribed limits; but it cannot will the movement of these other objects, as it can the movement of the muscles of its own body. It cannot even directly will or command the removal of its own body from one place to another. All that it can do for that purpose is to will the movement of certain muscles by which it creeps, or walks, or runs from one place to another. When, therefore, the word *will* is applied to the force exerted on extraneous bodies, it is only in a figurative or secondary sense. It cannot move them by a mere act of will. The will reaches no farther than the movement of certain muscles, which muscles move those parts of the body to which they are attached; and those parts of the body, when thus put in motion, move extraneous objects with which they come in contact, with a force, regulated by the mechanical laws of motion —that is a force proportioned to their momentum.

Nor does the will acquire any direct power over the mind itself, by having a body placed, to a certain extent, under its control. The mind still can attend but to one object at a time, at least in the sense in which we have already explained; and the attention, we have seen, is drawn to any object, not by a direct fiat of the mind, but by some quality in the object, or some circumstance connected with it.

But the power over the body with which the mind is endowed may be made to afford to it great aid in directing the attention to one object in preference to others. If it be a visible object that it desires to attend to, it can direct the eyes towards it. If it be a reminiscence, it can shut the eyes against external objects that might draw off its attention; it can read about an object to which it desires to attend, or converse about it, or remove the body to situations where it meets various objects which have been formerly associated with it. By such means it can procure much aid, from its control over the body, in keeping any object before it which it desires to examine or reflect upon. But still the act of the will is merely the producing those actions of the muscles by which these intermediate operations are effected.

If the most despotic monarch were deprived of all power of voluntary movement, he would also be deprived of all exercise of the will. He might still fervently desire to have some object effected, but he could no longer, even in a figurative sense, will it. From his habit of commanding, he might for a time attempt to effect his purpose, but his power to express his will is gone; he can make no sign, and he would soon cease to repeat his impotent attempts to exercise a will.

In loose, incorrect language, we say, a man wills operations through the medium of others, very remote from any movement of his own muscles. But he is merely like one who has set up a number of blocks of wood in a row, so that if the first be overturned in a certain direction, it overturns that which is next to it, and that the one beyond it, and so to the last. He desires and intends to overturn the last at a particular moment; but the only act of will that he puts forth is that by which he moves his own muscles so as to attempt to overturn the first. Till that be done, the state of his mind may be desire or inclination, but is not an exercise of will.

A king or general of an army, by writing his name on a bit of paper, or uttering a single word, may cause a city a hundred miles off to be sacked, and its inhabitants massacred; and, in ordinary language, he is said to have willed that catastrophe: but, speaking in strict correctness, the only act of his will was the movement of his muscles to write his name, or to utter his word of command. He *desired* and *intended* the destruction of the city, but he could will only the movement of his own muscles. This writing his name to an order, or uttering his command by his voice, was like the overturning the first block of wood, by which all the others in the row were overturned.

But what is it that moves the will? This, too, is a subject on which there has been much subtile controversy. We can afford space only to glance at the subject. The great point in controversy is, whether the will has a self-determining power, or whether it is itself necessarily moved from without. We have seen that the will, by its direct acts, can move only the voluntary muscles of the body. What moves it to move them? It seems obvious that the mind must have some reason for moving the members of the body. For many of these movements there may be very slight reasons, but for all of them there must be some reason. Much has been said and written as if the will and the mind were different beings; but the will is merely the mind in a certain state. The impulse of a motive is one state of the mind, the act of the will is another. The one is the mind considering, desiring, intending; the other is the mind acting. Now, can the mind act on the body without the previous state of considering, desiring, intending to act? To speak as if the will had a self-determining power, independently of other faculties or states of the mind, is to speak unintelligibly. The will, we have said, as distinguished from other faculties of the mind, is the mind acting on the body. And how can acting be self-determining, when determining is a different state of the mind from willing, that is, acting according to previous determination?

But is the will *necessarily* acted on by motives?—that is, is the will necessarily influenced or acted on by the previous determination? The answer is, certainly it is so. What is there to move the mind to act on the body but its own determination? We must, therefore, go a step further back, and ask, what moves the mind to determine on acting? Surely not a will previous to determination, for the will has no direct power over any mental operation, but simply over the body. The determination is fixed by the desire of effecting or attaining some object. I am hungry, and I see food before me. I, by an act of the will, stretch out my hand to take it. But the food that I see belongs to some other person, and I have no right to take it. If I be honest, therefore, that consideration will neutralise the desire for that particular food, and I determine not to take it, and the will is quiescent; but if I be dishonest, that consideration will not neutralise the desire, and I shall stretch out my hand for it notwithstanding; nay, perhaps with all the greater avidity that it does not belong to me.

Much has also been said on this subject as if the motives were external to the mind, whereas the motives are always in the mind itself, and consist of its desires. Some authors have spoken of the mind as if it were a kind of balance necessarily swayed to the one side or the other by the weights appended to it, these weights being external objects presented to it. It is true its desires are often excited by external things, but whether they be so excited or not depends on the state of the mind itself. Food presented to a man not hungry excites no desire to eat. A piece of gold laid in the way of a person who does not know the value of it, will excite in him no desire to take it, neither would it excite any such desire in the mind of an upright man; but it might excite the most ravenous desire in the mind of a thief. Two men, the one strong, the other weak, walk together through a lonely forest by night, and the weak man is known to have a large sum of money with him. The effect of these circumstances on the mind of the strong man will entirely depend on its previous state. If he were a thief and a ruffian, his position might prove an overpowering temptation to rob, and perhaps also to murder the weak man. If he were an upright and humane man, no such thought would be suggested, or if suggested as a mere speculation, it would excite no such desire: on the contrary, the desire excited would be to protect the weak man, and see him safely out of a place where he might be exposed to danger from others.

Much also has been said as if a man's character were determined by the acts of his will, and as if he were responsible only for these acts. But the acts of the will, or rather those acts of the mind which are called the will, are the mere indication of the previous state of the mind. It is true that a man is not morally accountable for acts that are involuntary. An electric shock might make a man plunge a knife into the body of another; but for that act he would not be accountable, for it was not the act of his mind, but merely a spasm of his muscles over which he had no control. It is true, also, that before a human tribunal a man can be held responsible only for his acts; but before God he is accountable for his purposes and desires, as well as his acts. Nay, even human laws pay regard to the intention. One man kills another. The law regards that act as *primâ facie* evidence of evil intention; but it admits proof to rebut the *primâ facie* evidence, and to acquit the manslayer of evil intention. A man's moral character is determined not by the acts of his will, but by the motives that operate on his will. The master of a passage canal-boat stated to one of his passengers, that, a few nights previously, he had a woman as his only passenger, who told him that she had three hundred pounds with her. This she let him know, that she might be the more secure from robbery. He went on to say, that he never had been in so great a state of excitement as he was the whole of that night; but that at last his good purposes overcame his evil thoughts towards the woman, and he seemed to ascribe considerable merit to himself that he had let her off uninjured. Now, was this man a robber and murderer, or not? If that is to be determined solely by the acts of his will, he was no robber or murderer, for he committed no such act. But he desired the woman's money; and what prevented him from taking it? If it was reluctance to murder, then he was only a robber in his heart, but not a murderer. If it was merely the dread of detection that prevented him from robbing and murdering the woman, he was both a robber and murderer. If it was the fear of Hell that prevented him, it was his superstition; for if he had been really a man who feared God, he would have felt no desire for the woman's money, he would have experienced no agitation about it, and his only care would have been to see her in safety at her destination.

The will is moved by previous desires, but these desires are influenced in various ways; modified, quickened, deadened, or altogether neutralised by perceptions, suggestions, considerations of infinite diversity; and the will, that is, the act of the mind on the body, *necessarily* obeys the determination to which the mind comes; and over these previous operations, that end in the act of the mind called the will, the will itself, that is, the act of the mind, can have no influence whatever.

A theological argument has been introduced into the controversy, namely, that if the will was not necessarily moved by motives, the acts of man could not be foreseen nor directed by the Deity. To this it has been answered, that if the foreseeing the acts of men implies that they are governed by necessity, then God's foreseeing his own acts must imply that they, too, are governed by necessity. We conceive this train of reasoning to be totally irrelevant, and can see no force either in the argument, or the reply to it. Suppose the mere thought of committing a crime were to cause any man violent pain in any part of his body, it might be predicted that he would abhor the thought, and much more the commission, of the crime. And if a man's mind be in a state that the thought of a crime causes horror, or any mental distress, it may be as clearly foreseen and predicted that he would not commit the crime. If, on the other hand, his mind were in such a state that it would be torture to him not to commit a crime (for example, not to drink intoxicating liquors, or not to revenge an injury), it might be foreseen and predicted with equal certainty, that he would, if he had opportunity, commit the crime. Yet in neither case does the man act from necessity, for in the one case he might, if he chose, do violence to his feelings, and commit the crime; and in the other case he might do equal violence to his feelings, and refrain from committing the crime. The whole power of the motive depends on the state of the mind; and if the state of the mind be foreseen, the acts of the will in given circumstances may be foreseen also.

Some argue that a man who resists strong temptation has greater merit than a man who is not tempted. But the question of merit has nothing to do with the condition of a man's mind. A man who has a strong desire to commit robbery or murder, but who from some other motive refrains from gratifying his desire, is surely in a state of mind infinitely inferior to that of a man who abhors robbery and murder, to whom the very thought of such deeds would be mental torture. God, therefore, may foresee, nay may determine the acts of every individual, without laying any necessity on them to do those acts; their doing or not doing those acts being determined by the state of their minds, combined with the outward circumstances in which they are placed.

In regard to the Deity acting from necessity, whatever necessity lies upon Him it is necessity from within his own spirit, and not from without. It is the necessity resulting from his own infinite wisdom, and power, and goodness, necessarily determining Him, to do in all cases that which is most wise and good. The Deity cannot do wrong, because the perfectly holy state of his own spirit necessarily determines Him always to do that which is right. If it were otherwise, he would not be the Deity, and "He cannot (*ου δυναται*) deny himself." But this subject belongs rather to ethics than to psychology.

CHAPTER IV.

THE ORIGIN OF OUR NOTION OF CAUSE AND EFFECT.

WE have seen that the mind, destitute of power to produce effects on anything external to itself, or even upon itself, could form no conception of cause and effect; that a succession of sensations, in any particular order, however long continued, would indeed beget the confident expectation that the same antecedent would be followed by the same consequent sensation, but would not suggest the idea that the one was the cause of the other. The regular sound of a drum before daylight would establish such a connection in the mind between the one event and the other, that the sound of the drum would suggest the sensation of daylight and excite the confident expectation of it; but it could never give rise to the notion that the sound of the drum was the cause of daylight. Some have supposed that when one event constantly and regularly follows another, we intuitively regard the first as the cause of the second. But in the case of daylight regularly following the sound of the drum, such an intuitive persuasion would be false, and it is surely very improbable, to use no stronger language, that any intuitive persuasion should be contrary to truth.

Is it said that the expectation that the same consequents will follow the same antecedents, which we have regarded as intuitive, often deceives us? The reply is obvious, " Never, if the antecedents be truly the same." We may be disappointed in our expectation of consequents, but it will only be when we suppose antecedents to be the same which were in fact different; and the distinguishing of merely similar from identical antecedents is one of the great lessons of life and of all philosophy. When the antecedents are really the same, we are never disappointed in the consequents.

We are firmly persuaded, therefore, that although a regular, constant succession of sensations or events would, by a law of our mind corresponding to the law of the universe without, excite a confident expectation that the same antecedents in the succession would be followed by the same consequents, yet that it would never suggest to us the notion of cause and effect.

But when the mind has power given to it to move the muscles of the body, and, by these, the various members of the body which are placed under its control, it is then conscious that it is itself the cause of the voluntary movements of the body. My hand, or my foot, or my eye moves simply *because* I will it to move. Now it is impossible to conceive of any notion of cause and effect more pure, more perfect, or more in accordance with truth. This is not a mere regular succession. The act of the mind and the movement produced by it are so perfectly simultaneous in the mind's regard, that the finest analytical edge cannot be inserted between them. The mind is conscious of being the cause of the effect produced, without being conscious of any succession. It does not first will, and then see the effect of its willing, but the fiat of the mind and the intended motion produced by it are in the consciousness of the mind at the same instant.

But again, the mind is conscious that it is the cause of whatever change is made in extraneous bodies by means of its power over the members of its own body. If I lift a stone from the ground, I am conscious that I am the cause of the stone rising from the ground, in opposition to the law of gravitation which would have kept it there. If I push anything from me, or draw anything towards me, I am conscious that my will is the cause of these movements. Here again there is no succession in the mind's consciousness. I will to lift the stone, or to draw towards me or push from me the object which I grasp, and it is instantaneously done.

Yet again, if I intend and produce a movement by the intervention of media, I am conscious that I am the cause of the movement. If I set up a number of blocks of wood on their end in a straight line away from me, so that by overturning the one next to me I should overturn the whole to the last of the series; and if I then voluntarily put forth my hand and overturn the first, I am conscious that I am the cause of overturning the rest. Here is, indeed, a perceptible succession in the process by which the last block is overturned; but it is not from a regular succession that I derive my notion of cause and effect in that case, but from my consciousness of my being the direct cause of overturning the first with the intention of also overturning the others. If a quantity of gunpowder be placed in a house, and a train laid from it, and if I voluntarily take hold of a lighted match and apply it to the end of the train, with the intention of blowing up the house, then I am conscious that I was the cause of the explosion that ensued. If the general of an army sign and deliver an order that a district of country be laid waste with fire and sword, then he is conscious that he was the cause of the conflagrations and bloodshed that ensued; while, at the same time, every inferior agent, in executing the order, is conscious of being the cause of the effects produced directly by the movements of his own body, or by the movements of others acting under his orders

This is the first and original class of phenomena from which we derive the notion of cause and effect. But there are other classes of phenomena to which this notion is extended when once we get possession of it.

A second class of phenomena with which we connect the notion of cause and effect is that in which the mind is passively affected by external objects. Our acquaintance with the external world enables us to discover that certain objects produce certain sensations; or, at least, that certain sensations always accompany the presence of certain objects. The ringing of a bell, or the beating of a drum, produces certain sensations of sound; the appearance of the sun is always accompanied with certain sensations of sight and feeling, and we ascribe our sensations to these outward objects as the causes of them. This, however, we apprehend to be only an extension of our notion of cause and effect derived from that class of phenomena in which the mind is the active and conscious cause of the effects; and we greatly doubt whether, even after the mind had discovered the existence of outward objects, and their connection with our sensations, it could ever have formed from that discovery any other notion than that of a constant connection which it would intuitively expect to be uniformly preserved. But having once obtained the notion of causation from our own consciousness, we naturally extend the notion of effects to those cases in which our mind is passive, and of causes to the antecedents of our passive sensations. Children are prone to be pleased or displeased with external inanimate objects that affect them pleasantly or painfully. They are vexed and angry with the pin that pricks them, and hug the little book that delights them with its brilliant pictures.

A third class of phenomena with which we connect the notion of cause and effect, consists of that in which the mind is not regarded as the cause, or its sensations as the effects; but in which it is a mere spectator of constant and regular connection of phenomena, or successions of antecedents and consequents among external objects. This, however, is merely another case in which we extend, by analogy, to mere successions the notion of cause and effect, derived from our own consciousness of being the cause of certain effects. Our expectation of similar consequents from similar antecedents is the operation of that law which we have found to be intuitive, or at least to be born with us. The notion that the consequent follows the antecedent, as the effect of a cause, is not intuitive or born with us, but is easily and naturally derived from those cases in which we are conscious that our minds are the causes of effects on our bodies, and on other objects external to us. I strike a ball lying on the floor with my hand or foot, and it rolls away from me; another ball strikes it, and produces the same effect,—and as I regarded my hand or foot as the cause of the motion in the one case, I am easily led to regard the second ball as the cause in the other. I strike a bell with a hammer, and it sounds; and I am conscious that I am the mediate cause of the sound, and the hammer the immediate cause. The bell is swung, and the tongue strikes it and produces the same effect: and what more natural than to view the tongue as the cause of the sound? In both cases, the real causes were my wielding the hammer, and the person who swung the bell; but the transfer of the notion of cause to the passive instruments employed in producing the effects, is so easy and natural, that very young children make it spontaneously. We ask, "What hurt you?" and, as soon as they can speak, they say the table, or the chair, or the spoon, as if these objects were the active causes of their hurt.

The theory, therefore, that has been adopted by many able men after Hume, that our notion of cause and effect is derived from our observing that the same consequents always follow the same antecedents, and consequently that nothing more is known to us of cause and effect than a mere regular succession without any connecting principle, is a manifest fallacy. For our observation of a regular succession of antecedents and consequents, so far from being the origin of our notion of cause and effect, is only an analogical extension of that notion previously obtained from our own consciousness to these regular successions. For, on the one hand, no mere regular succession of events, however long continued, would have given rise to the notion of cause and effect in our minds; and, on the other hand, it requires no regular succession of antecedents and consequents to give origin to that notion; but on the very first occasion on which the mind is conscious of producing a voluntary movement of any member of the body, it is conscious that itself is the cause, and that the movement is the effect.

The reader will observe that we have not been discussing the nature of cause and effect, but simply the mode in which we form the conception of cause and effect. The qualities of objects which produce effects on other objects may be necessary causes, for aught we know to the contrary; but we know nothing more than that they are regular antecedents to consequents. In regard to the assertion that we cannot conceive of any change without a cause for it, see Book I., ch. 3, p. 44.

Let us now suppose the mind, with its new acquisitions—its power over the body, its perception of the external material world, its will, and its conceptions of cause and effect—introduced upon the theatre of the world, among the multiplicity of animate and inanimate objects with which it is filled, and the various influences to which it is subjected, and let us look back upon those powers and operations which we have contemplated in their embryo state, observing what modifications its new circumstances may make upon them, and what new faculties or operations they may develop. We confine ourselves in this division of our work to the mind's perceptions of the material world, regarding, for the present, the inferior animals, and even man himself, but as material machines. We shall reserve the recognition of other minds, with the effects of that recognition, to a future division.

CHAPTER V.

SENSATION, AS MODIFIED BY PERCEPTION.

The modifications of sensation occasioned by the new circumstances into which we have introduced the mind, are chiefly the two following.

1. By the mind's power over the motions of the body, combined with its knowledge of external objects, it has acquired a certain power over its sensations. It cannot prevent any external object which comes within the range of its organs of sense, from exciting the sensation which the qualities of the object are fitted to excite; nor can it excite any sensation in itself independently of the presence of the object fitted to excite it. But

it has obtained a certain power, chiefly by the use of the hands, to bring objects within the range of its organs of sense, or to remove them from it; and, by the use of the lower limbs, to bring the organs of sense within the range of the effects of external objects, or to remove them from those effects. It can bring a rose to the nostril, or remove it out of the way, or it can go forth to the garden and smell it there; or go where its odour cannot reach. By means of that beautiful mechanism, also, by which the head is attached to the body, it can turn those organs which are situated in the head into the most favourable positions for being affected by their respective objects of sense. Besides the motions of the head, the eye—which requires more rapidity and more precision in its movements than the power of motion in the head furnishes—is provided with a mechanism of its own for turning it towards any object from which the mind desires to receive sensations, with the utmost conceivable promptitude and exactness, and also for closing it against any object from which the mind desires to avoid receiving sensations. The mind has thus some choice, although very limited, in the succession of its sensations.

2. The other modification of sensation occasioned by its altered circumstances is, that its sensations come to be regarded almost exclusively as the signs of the presence, the positions, and the qualities of external objects. Those laws which we found to regulate our attention to sensations continue still to operate; but in a vast majority of cases the attention does not rest on the sensation itself, but is carried forward to the external object that causes it. This follows of necessity from its discovery that sensations are caused by external objects, and also from the power which it has acquired of choosing its sensations—obtaining those that are pleasant, and avoiding those that are painful. Its general history, therefore, in regard to sensation, comes to be that its attention

is usually transferred from its sensations to its perceptions of external objects. That intensity of a sensation, or its novelty, that drew the attention of the mind to the sensation itself, now draws it to the outward object which causes the sensation. When it experiences the sensation of light, it thinks of the sun, or of the lamp, that causes it. When it experiences the sensation of warmth, it thinks of the fire from which it receives it. When it hears the sound of a human voice, it thinks of the person who utters it: the same law governing the attention in regard to the external object as that which governed it in regard to the sensation itself, namely, the intensity of the sensation, the novelty of it, or of the object causing it, and the desire of examining it, or the cause of it.

The attention to the pleasure or pain, also, of a sensation is generally transferred to the object causing it. A child deriving pleasure from the taste of an apple, immediately concentrates its delight on the apple which was the cause of its pleasure; and the sting of a bee rivets the attention intensely on the little insect that caused the pain. When pain cannot be referred to any immediate cause, as in tooth-ache, the attention is fixed on the sensation itself.

CHAPTER VI.

MEMORY, AS CONNECTED WITH PERCEPTION.

Memory we found to be the aptitude of the mind for having past sensations recalled to it, under the regulation of certain laws called the laws of suggestion or association; and the sensations thus recalled we denominated, suggested or recalled or remembered sensations.

The new circumstances into which we have introduced the mind extend the range of those laws of suggestion by which the remembrance of the past is regulated. Sensation, either original or suggested, besides suggesting former sensations original or suggested, suggests external objects the existence and qualities of which have been discovered by means of sensations. Those perceptions of external objects, especially, which are received by the sense of sight, being innumerable, extend the range of memory in regard to the multiplicity of its objects almost to infinity.

The principal laws of suggestion seem to be, resemblance, contrariety, contiguity of time or place, comprehension, and cause and effect. It is true that comprehension and cause and effect might be included in contiguity, but we believe that comprehension and cause and effect occasion suggestions which mere contiguity of time or place would not suggest.

Objects that are alike, or regarded as alike in any particular, may suggest one another. Objects that are observed to be dissimilar, or contrary to one another, may also suggest each other. A very tall man may either suggest the remembrance of another tall man, or of a very short man. And this law extends to analogical similarities or dissimilarities. Thus, the sight of one royal palace may suggest one that had formerly been seen, because they have both been the residence of kings. Or a palace may suggest, by contrast, a miserable hut; or the remembrance of a palace may suggest some of the objects that were in it, or near it, when it was seen; or it may suggest the friend that was with us when we saw it; or it may suggest the sensations of heat or of cold, of crowding and pressure which accompanied our seeing it; or, by analogy, it may suggest the noble mind of some individual richly furnished with princely dispositions and elegant accomplishments. Or, perhaps, more naturally, such a person's mind might suggest the remembrance of a royal palace.

Contiguity of time or place is another common cause of suggestion. We meet a person whom we have formerly met in a particular city or house, and immediately the city or the house arises to the view of our remembrance. Many years ago, two individuals, whom we well knew, were drowned at a particular spot in the Frith of Clyde; and we have never passed that spot, nor thought of it, without remembering them. On the night of the illumination of London for the Peace of Amiens, there was a violent thunder-storm: we have never since thought of the illumination without thinking of the thunder-storm; and have seldom witnessed a thunder-storm without thinking of the storm in London, the illumination and the Peace of Amiens.

Comprehension, that is, any whole may suggest its parts, and *vice versâ*. The thought of the class or order of mammalia will suggest some of the genera or species that belong to it; or any animal or plant may suggest the genus or class to which it belongs.

Cause and effect, also, almost always suggest one another. A sultry day suggests the sun and the calm state of the atmosphere as the causes of it; and a bright summer morning with a calm atmosphere, suggest a sultry day to follow. An explosion suggests the idea of the gunpowder that caused it; or the sight, or smell, or remembrance of gunpowder, suggests the idea of explosion that might be caused by it.

As it is with the suggestions of sensations, so it is with the suggestions of external objects, that some minds are more under the influence of one law of suggestion, and other minds more under the influence of another law. The thoughts of naturalists flow mostly in the channel of differences and resemblances; of poets, in that of analogical resemblances; of wits, in that of analogical differences or contrarieties; and of plain historical men, in the kindred channels of contiguity of time, and contiguity of place; and of philosophical men, in that of cause and effect. These different tendencies may originate in differences of constitution in body or mind, as phrenologists teach, and may be indicated by the conformation of the skull; but they are influenced to a certain extent by such causes as health or sickness, circumstances tending to produce cheerfulness or sadness, education, and habit.

When objects are recalled, they are recalled, as we found sensations were, with the pain or the pleasure, of whatever kind, that originally accompanied the perception of them. A person who has been scalded with boiling water, will ever after shrink at the sight of boiling water in a position in which it might fall upon him. A burnt child dreads the fire, because the sight of fire recals to him the pain of burning. But that pain or pleasure follows also that law of the remembrance of sensations, by which it becomes more faint on every succeeding suggestion of the object that occasioned it.

As it is in recalling sensations, so it is in recalling perceptions, that the more frequently the perception of one object recals another, or the more frequently the remembrance of one object recals another, the more certainly and the more promptly will the suggestion take place. A fine example of this law we have in learning languages. Certain sounds are connected with certain objects by contiguity of time; the sound is pronounced at the same time that the object is perceived; it may require several repetitions of the sound in connection with the object, to render the suggestion prompt and certain; but, by frequent repetition, the suggestion becomes so certain and so immediate, that we almost forget that it is a suggestion. When one language is learned by the immediate connection of its sounds with the objects intended to be suggested by them, other languages may be learned by connecting the sounds of the two languages. But a language thus learned can never be learned so perfectly, as that which is learned by directly connecting the sounds with the objects. It has two suggestions to traverse before it arrives at its end, namely, the sounds of the second language suggesting those of the first, and the sounds of the first suggesting the objects indicated by them. Hence a language can never be perfectly learned but by residing for a time in a country where it is vernacular.

Another law of suggestion is illustrated in the acquisition of languages, namely, that sensations or perceptions suggesting one another in a particular order, may suggest one another in that order certainly and promptly; but very imperfectly, or not at all, in any other order. One who has learned a foreign language by translating it into his own, but who has not equally practised translating from his own into the foreign language, may readily understand what he reads or hears in the foreign language, and yet may not be able to express a single sentence in it. The words which may be perfectly familiar to him when he reads or hears them, may not occur to him in the reverse order of the suggestion from his own language to the foreign language. This is but another form of the fact formerly noticed, that we may be familiar with a tune and yet not be able to sing or recognise any two notes of it backward.

Another beautiful example of the law of suggestion is to be found in the facility, attained by practice, of reading and understanding, and also of writing written language. certain visible marks are connected with certain sounds, and these sounds with certain sensations or perceptions, or relations of sensations and perceptions. Yet this double order of suggestions is made by repetition with so much certainty and promptitude, that we collect the sense of what is written almost as rapidly as the eye can run along the lines of a page. Perhaps a still more striking example of this law is the certainty and rapidity with which musical notation is understood, and the sounds indicated by it produced; for here there is frequently, as in organ and piano-forte playing, a succession, not of single notes merely indicating single sounds, but a succession of two, three, four, nay, eight or ten notes, indicating so many sounds that are to be produced at once, and these groups following one another in rapid succession. Yet so perfectly may the connection of the visible marks with the sounds that they indicate, and these with the muscular movements that are required to produce them, become, by repetition, that the performer produces the sounds in all their multiplicity and variety and rapidity with unerring certainty; and not only so, but perhaps may, while he is producing them, be conversing with some person on other subjects. This phenomenon has been called mechanical; but, as we have already hinted, we regard the word mechanical used in such a connection as unintelligible. No known mechanical law would advance us one step in our endeavours to explain the phenomenon. It is, we believe, a purely mental phenomenon, combined with the perfect command which the mind possesses over the voluntary motions of the body; and is the operation of that law of suggestion which we are endeavouring to illustrate.

Although the mind, in consequence of its advanced condition, has obtained no direct control over its suggestions, yet it has obtained an indirect control over them, similar to that which it has acquired over its perceptions, by its power over the body. It, in various ways, can bring itself into favourable circumstances for avoiding painful recollections, and recalling such perceptions and remembrances as are pleasant. When the pain of the remembrances is very intense, no means that it can adopt will certainly be effectual for excluding them. On the contrary, the very effort that is made to avoid the dreaded remembrance may become the means of recalling it. But, when no strong emotion is implicated in the remembrance, the mind, by its power over the body, can do much towards regulating its trains of thought. It may bring itself into situations where other former situations and perceptions are naturally suggested, —it may by conversing on other subjects, or listening to such conversation, by reading, or engaging in other occupations interesting to it, contrive if not to banish the painful remembrance which it would avoid, render its recurrence less frequent, and have its thoughts occupied by subjects calculated to afford pleasure.

As we found it to be in the suggestions of sensations, so it is in the suggestions of perceptions that these latter suggestions necessarily imply the discernment of resemblances and differences among the objects, the perceptions of which are recalled by suggestion. Were no differences or similarities observed, the laws of suggestion could have no place. Now, in the extension of the laws of suggestion from sensations to perceptions of external objects, the range of discrimination is immensely widened. Multitudes of sensations which have become indifferent, and cause neither pleasure nor pain, and the differences and resemblances of which would consequently pass unheeded, excite interest, and their resemblances and differences command the most earnest attention, as soon as it is discovered that they are the signs of external objects, indicating their presence, their qualities, or their position. The most minute difference in any two sensations, of not the slightest importance on account of any pleasure or pain occasioned by either, yet indicates some difference in the two objects which cause the sensation. Nay, a very minute, hardly perceptible difference between two sensations may indicate important differences in the objects from which they proceed. Many a plant or seed, fit for food, is distinguished by very minute differences of sensation from poisonous plants or seeds. What seems to be the rumbling of a cart in the streets may be a peal of thunder. A faint sound, that could scarcely be distinguished from a gentle tap on the table, may be the indication of a distant and approaching cannonade.

The most practised eye sometimes finds it difficult to distinguish a cloud from distant land. One of the great lessons of life, which we never fully master, is to be able to recognise the same objects in different positions at different distances, and with different concomitants, and to distinguish them accurately from different objects. And yet how much often depends on such accurate discrimination! How much is a diamond like an imitation of it in paste; and yet how important to a dealer in precious stones to be able accurately and certainly to distinguish it! The various kinds and degrees of resemblances and differences in objects, which are indicated by differences and resemblances in the sensations occasioned by them, are innumerable; and any one observed difference may be an indication of the existence of other differences which have not yet been discovered. Sir Isaac Newton conjectured, from the power of the diamond to refract light, that it was a combustible substance. And not only has this conjecture been confirmed, but it has been found that, while such precious stones as rock crystal, topaz, and others, are connected with silex, and the sapphire and ruby are nearly pure clay, the diamond is carbon, of the nature of coal and wood, is connected with marble, and even with the fumes that rise from fermenting liquors.

The accurate discrimination, therefore, of the resemblances and differences among our sensations as indicating differences and resemblances in the objects that cause them, is so important, that the ingenuity of man has brought to the help of the senses various instruments adapted to aid in various kinds of scrutiny. Hence we have optical instruments of all kinds, microscopes for scrutinising small objects, telescopes for examining distant objects, instruments for measuring distances, magnitudes, weights, specific gravities, angles, temperatures, motions, effects on other objects, as attractions, repulsions, refractions, reflections, and innumerable others, by the aid of which the various realms of nature are explored, and every object organised or unorganised, animate or inanimate, is scrutinised and tested, and its relations to other objects carefully and accurately determined.

We now again come to that law to which, when treating of sensations, apart from perceptions, we called particular attention as laying the foundation of many important phenomena, — namely, that by which in the repetition of sensations, or the remembrances of them, the pain or pleasure of them gradually subsides, while the mind becomes more perfectly acquainted with them, and with the resemblances and differences which exist among them. The same law we find in force when the attention is drawn from the sensation to the external object of which it has become the index. Here, as in the case of sensations, the discovery of every new object is pleasant or painful. We should rather say, the discovery of every new object—that is, the discovery of novelty in any object, gives pleasure, except when some painful sensation or suggestion may accompany the discovery. By the repetition of such perceptions, or remembrances of them, the pleasure experienced on the first perception of them gradually subsides into indifference. If they at first afforded great pleasure, the descent towards indifference is slower, but equally certain. And after becoming indifferent, if frequently repeated, they become disagreeable; but may, on a continued repetition, rise again to indifference. We do not here, of course, include those objects which are ever varying and ever exhibiting something new. These continue to give pleasure so long as their powers of producing variety are unexhausted; but when that takes place, they too cease to please. A musical box which performs one fine piece of music with neatness and accuracy pleases, till we become familiar with its succession of pleasant sounds, and then it palls upon our ear. If it perform two pieces, it pleases longer; if six or eight, still longer. Not, however, to an indefinite extent, or in proportion to the number of pieces it performs; for there is a sameness in the sounds of such an instrument, for which, beautiful as they may be, no diversity in the pieces performed by it can compensate, and we become tired of the tinkling sound, without stopping to consider whether the piece that it performs be the same that we have heard before, or a different one. The history of the effect of such an instrument on the mind, if we were at first much delighted with it, is that we gradually become indifferent to it; if it continue to be set a-going in our presence, we are annoyed with it. The few first tones of any of its performances excite a mixed feeling of ridicule and disgust. If, however, the performance continue, like the musical bells of a clock, at stated times, our disgust itself follows the general law, and passes away, and we scarcely hear the sounds of it, unless our attention be particularly called to them. The great defect in all such instruments is that they are not the expression of any emotion in a living feeling performer, but mere pieces of dead mechanism, so contrived as to mimic the expression of feeling. We may have occasion to return to the subject. A stranger visiting, for the first time, such a scene as the Falls of Niagara is overwhelmed with astonishment and awe; but those who have resided for some years in the neighbourhood of the Falls pass and repass them with the most perfect indifference, except when some unfortunate animal or fellow-man being involved in the eddying torrent may give to them a new and momentary interest.

But while the pleasure or the pain which accompanied the first perception of any object gradually fades on repeated subsequent perceptions or remembrances of it, these repeated perceptions bring the mind into more exact acquaintance with it, and with its relations to other objects. Here we have the elements of our perceptions as of our sensations, namely, the distinctive characteristics, and the pleasure or pain excited by them separating immediately after the first perception, and taking different directions,— the one becoming more perfectly discerned, and occupying more of the current of thought; the other vanishing away. But here, again, we find a noble compensation for the loss of the pleasure of a first perception, in the pleasure which the extended power of discrimination affords. The pleasure derived from the perception of the isolated object is soon gone; but the observation of its resemblances to other objects, and differences from them, may afford a thousand pleasures, succeeding one another as one and another resemblance or difference is discovered, till its precise place in relation to other objects is determined.

This observation brings us to the great division of subsequent mental phenomena dependent on the perception of external objects, namely, the emotional and intellectual.

CHAPTER VII.

EMOTIONS DEPENDING ON PERCEPTION.

We must request the reader to look back on what we have advanced on emotions as connected with sensations, and the memory of them. As our first duty must be to mark the modifications of these emotions occasioned by the power of the mind over a body, its discovery of an external world, and of the relation of cause and effect, and then to consider what new emotions its altered circumstances may elicit.

The emotions excited by pleasant or painful sensations will now be generally directed to those external objects which the mind has discovered to be the causes of them. We naturally are pleased with the presence of that which causes pleasant sensations, and displeased with that which causes painful ones, with an intensity proportioned to the pleasure imparted and the pain inflicted.

Any object, the presence of which causes unpleasant or painful sensations, is regarded with *dislike* or *disgust*, while objects which yield pleasant sensations are regarded with an emotion approaching to *love;* but *love*, and its opposite, *hatred*, can scarcely be used with propriety as having for their objects external things without mind. We shall, therefore, reserve the consideration of love and hatred, and their modifications, to a future stage of our investigations.

After receiving pleasure from the presence of any object of perception, the mind naturally *desires* the repetition of its presence, for the same reason that it desires the repetition of the pleasant sensation; and after experiencing pain from the presence of any object, it as naturally has an *aversion* to the renewal of its presence.

If a series of events among external objects repeatedly end in the presence of any object that affords pleasure, then the commencement of that series will excite *hope* more or less confident, as before, in proportion to the familiarity of the mind with the series, and more or less ardent in proportion to the amount of pleasure in which the series has on former occasions ended. And a series of events repeatedly ending in the presence of an object causing pain would, on its commencing again, excite *fear.*

If a series of events among external objects causing pain repeatedly end in pleasure, then the pain of the series will be greatly mitigated by the anticipation of the expected pleasure; and a series of events, pleasing while it lasts, but always ending in pain, will have the pleasure afforded by it poisoned by the vivid suggestion and anticipation of the pain in which the series is expected to end.

If a series of events or changes among external objects which, on former occasions, has ended in pleasure, should commence, but be broken off before it comes to the expected conclusion, the effect would be *disappointment* and *sadness*. If the series on former occasions ended in pain, its being broken off before the expected painful conclusion would excite *agreeable disappointment* and *joy*. If a series which had on former occasions ended in pain not only be broken off, but end in pleasure, or the series that had ended in pleasure end in pain, then the unexpected pleasure would be heightened by *surprise* as at a novelty, and the unexpected pain by *wonder* and *painful perplexity*.

Besides these modifications of those emotions of which a mind conversant only with sensations would be capable, occasioned by its possessing the perception of objects external to itself, it becomes capable of many new emotions. Most of these imply the recognition of other minds, similar to itself, and therefore few will come to be treated of afterwards. The following, however, belong to the present stage of our progress.

The power which the mind possesses over the body, by which it can avoid painful sensations, or obtain pleasant sensations, either by moving the body out of the presence or into the presence of other objects, or by moving them into its presence or out of its presence, gives rise to some important emotions. If, for example, the mind may have power to avoid the presence of an object which it knows would cause pain, and yet may have motives for rather bearing the pain, the emotion resulting from these conflicting motives may be *patience*, *fortitude*, *resolution*, *determination*, according to the amount of pain which it might avoid, but which it chooses to bear; or *impatience*, *timidity*, *cowardice*, according to the amount of pain and the motives which it has to bear it, but which it chooses to avoid.

From the notion which the mind has received of cause and effect, combined with that of the external world, are derived such emotions as *self-gratulation*, on reflecting on pain that it has avoided and pleasure that it has obtained by its own efforts; and *regret* and *self-upbraiding*, in reflecting on pain that it has suffered, or pleasure that it has missed by its own want of effort.

The influence of language on emotions connected with perception.

Here seems to be the point at which to introduce some notice of the influence of language on the mind. The reader will please to notice that we are not tracing the influence of language historically, nor has any part of our investigation been conducted historically. We do not imagine that the mind was experienced in sensations and those emotions that are dependent on them, and the discrimination and inferences exercised on sensations, before it attained to the power of volition, and the knowledge of objects external to itself, and the various emotions thence arising; for we are aware that its knowledge derived from every source, and the experience of its emotions of every kind was proceeding from the hour of its introduction to the world simultaneously. But we have separated sensations, and the exercises of mind dependent on them, from perceptions and the exercises of mind dependent on them, and have examined them consecutively merely that we might the better discern their nature, their dependencies and influences on one another. So, were we to trace the origin and progress of language historically, we should probably commence with its use in communicating our thoughts to one another; but, in our order of demonstration, we find, at the point at which we have arrived,—namely, our power over the voluntary motions of the body, the perception of objects external to ourselves, and the emotions that are connected with that power and these perceptions,—that language exercises important influences.

Language has manifestly great power in regulating the succession of our suggestions, and consequently in directing the whole train of our thoughts. The names of objects or of events or relations are certain sounds voluntarily produced, arbitrarily connected with these objects, or events or relations, by the frequent repetition of the sound with the direct perception of that with which it is intended to be connected or with the remembrance of it. Now, by the laws of suggestion already explained, the hearing of the name of any object, or event, or relation, or the remembrance of the name, instantly recals that of which it is used as the name. And if that which is thus recalled by means of its name be one that has given pleasure or pain, or has awakened any emotion, then the mention or remembrance of the name recals the pleasure or pain, or the emotion originally occasioned by it. The use of language thus introduces a new application, and consequently a great extension of the laws of suggestion. For words suggest one another, on the same principles with other objects—by similarity or dissimilarity, by beginning alike or unlike, or ending alike or unlike—long words sometimes suggesting long words, or by contrast short words, and short words suggesting either short or long words; and all these words immediately suggesting the things of which they stand as the names, thus widening the power of suggestion,—that is, of memory,—to an incalculable extent.

It scarcely needs to be added, that the use of written language produces these same effects with spoken language. Written language, at least in all countries that we are acquainted with, (except, perhaps, China, and its dependencies and the neighbouring countries under its influence) consists of arbitrary, visible, or tangible marks, on any substance capable of receiving them, so connected with the arbitrary sounds of spoken language, by frequently repeating these sounds along with the perception of the written marks, so that the written mark introduced to the notice or attention of the mind instantly recals the sound with which it is associated, and the sound as instantly recals the object of which it is used as the name. It is evident, therefore, that the effects of written language in directing the thoughts, must be much the same as those of spoken language. The written language of China, and the neighbouring countries, is said not to suggest sounds, but objects. How far this is practically the fact—that is, how far the reading of the Chinese written language can be understood without the medium of the spoken language, we have no data on which to form a judgment. It might be an interesting topic of philosophical inquiry, how far the nature of their written language distinguishes the current of their suggestions, and, consequently, the general character of their minds, from those nations which use written characters representative of sounds.

Written language gives to the mind much greater power over the current of its thoughts than spoken language. The effect of spoken language, if confined to the person himself who uses it, which is supposed to be the state of the mind as we are now contemplating it, in giving power to the will over the trains of thought, would be extremely limited; whereas, by means of the power which the mind possesses over the body, it can direct its thoughts into any train of which it possesses a record in written language. If it desires to have its thoughts directed to any particular subject, or led into any particular course, it has, in order to obtain its object, only to select a book, or other record of thoughts on the subject, and direct the eye to its pages. This may not always be effectual, for the thoughts may be carried off in some other direction, in despite of every such effort to control them, but in ordinary cases it will be found to be effectual.

CHAPTER VIII.

THE INTELLECTUAL POWERS OR OPERATIONS DEPENDING ON PERCEPTION.

THE discriminating faculty of the mind, or its power of noticing the resemblances and differences of its sensations, being now extended to the resemblances and differences of the objects which are the causes of its sensations, it is chiefly occupied with these latter resemblances and differences.

One cause of its attention being drawn from the resemblances and differences among its sensations, to the resemblances and differences among the objects which are the causes of its sensations, is, that its acquaintance with the qualities of those objects by which its sensations are excited, aids it in obtaining some control over its sensations. For when it knows what objects cause agreeable, and what objects cause disagreeable sensations, it can employ that power which it possesses over the body in obtaining the one, and avoiding the other.

But another, and perhaps the chief cause of the mind's occupying itself more with the differences and resemblances among external objects when it becomes acquainted with them, than with the differences and resemblances among its own sensations, is, that the observation of the differences and resemblances among external objects opens a way for it to obtain much interesting knowledge respecting these objects. These various qualities and combinations of qualities in different objects, indicated by their resemblances and differences, such as the resemblances and differences in their production, structure, and composition (if they be organised bodies,) between their modes of life, growth, and the relations in which they stand to one another, afford high gratification. And according to the law already explained, while the first pleasure derived from the observation of a similarity or difference soon fades away, the observation of every new similarity or difference, and every further discovery made by the means of such observations, affords a new pleasure. The power of discerning these resemblances and differences has sometimes been treated as a distinct power of the mind and termed *abstraction*. But it seems to be nothing more than the direction of the attention to one sensation, among many excited by the same external objects. An object on being presented to the senses, causes sensations that come by experience to indicate its form, size, hardness, softness, warmth, or cold, number of parts, colour, smell, taste, and such like. The attention of the mind may be directed to any one of these sensations, or to the qualities indicated by them, and may compare it with the memory of sensations which it has received from other external objects, or with their qualities, and may determine that it is similar to them, or different from them, in some more or fewer of these qualities. This process leads to

The classification of external material objects.

The discernment of resemblances and differences among external objects gives rise to classification. We naturally, for the purpose of rendering our knowledge of the qualities of objects, and of their mutual resemblances and differences more easily remembered, and more available for use, class those together, which we observe to resemble one another. From our early childhood we form such classes. We class all stones together from their hardness and weight, all green plants, all trees, all quadrupeds, all birds, all insects, all fishes. By and by, we become more minute in our classification, and class together all dogs, all sheep, all ducks, all geese, all cocks and hens, all people, all men, all women—and so on to the utmost range of our knowledge. As our knowledge increases, our classification becomes still more minute, till we discriminate multitudes of kinds of stones, many thousands of different species of plants and of animals, the individuals of each species resembling one another in certain points, in which they differ from the individuals of other species. Natural history, in all its various branches, consists chiefly of classification, founded on the exact observation of resemblances and differences among the infinite multitude of external objects.

As the acquirements of knowledge increase, the thoughts themselves or operations of the mind, founded on perception are classed. The knowledge of number, form, and measurement of material objects, is called mathematics. The knowledge of actually existing objects generally forms the class of natural history, divided into the subordinate classes of mineralogy, botany, zoology, &c. The knowledge of the principles on which these various kinds of objects are governed forms the class of natural philosophy, subdivided into the subordinate classes of astronomy, geology, animal and vegetable physiology, and others. The knowledge of the mind itself forms the class of mental philosophy, including in it metaphysics, logic, ethics, &c.

Induction, as exercised on external material objects.

Induction, or inference, is founded on that confident expectation which we have found to be intuitive, or at least to manifest itself almost immediately after birth, namely, that the same antecedents will be followed by the same consequents. We observe, that when two particular substances are brought into contact, they become hot, and give out light, and smoke—they take fire ; and we confidently infer or expect that the same two substances brought together under the same circumstances, will always exhibit the same phenomena. If we observe two substances, when brought within a certain distance of one another, draw nearer, till, if they be not forcibly prevented, they come into contact, we infer that if the same two substances, or substances of precisely the same kind, be brought within the same distance, the same result will take place. We call this result attraction, and expect that the same substances will always attract one another under the same circumstances; and these phenomena are regarded as antecedents and consequents, that have stood so connected with one another in all times and places, and that will continue to be so as long as the present constitution of things endures, or, in other words, as long as substances exist having the same qualities.

Inductive philosophy adds to such inferences classification. Antecedents and consequents being observed are classified by observing their resemblances and differences. It had, for example, been observed by long and minute observation, that the planet, Mars, revolves round the sun in an elliptical orbit, of which the sun occupies one of the foci, and that his motion varies in velocity in different parts of his orbit, according to a certain law. It was then found by mathematical demonstration, that his revolution would be accounted for by supposing him to be drawn towards the sun with a certain force, and having at the same time a certain velocity given to him in a certain direction. It was thus rendered probable that Mars was drawn towards the sun with the supposed force. But it was found that the motions of all the planets, according to their several distances from the sun, would be accounted for on the same hypothesis, namely, that they were drawn towards the sun with forces varying with their distances, having, at the same time, a certain velocity communicated to them in another given direction. The same hypothesis was applied to the earth, and was found to account for the phenomena of its motion; and this discovery was confirmed by exactly observing the angular breadth of the sun's disc at various parts of the earth's orbit, showing that she too moved in an elliptical orbit, of which the sun occupied one of the foci. The motions of all the planets round the sun were classed together by these resemblances. But the moon was found to revolve round the earth in an elliptical orbit, with the earth in one of the foci. Do the moon and the earth attract one another, as the sun and the planets do? This hypothesis was found exactly to account for the phenomena of the moon's motion. Then, it having been observed, that several of the planets are accompanied by satellites, as the earth is by the moon—Are these satellites attracted towards their respective planets, as the moon is towards the earth? This hypothesis also was confirmed by observing the motions of these satellites. But still further, it is found that if any heavy substance be lifted up from the ground, and left at liberty, it falls to the earth with a force regulated by certain laws. Is that tendency to fall to the earth the same force of attraction which draws the moon towards the earth? That hypothesis was also found to account for all the phenomena of falling bodies; and therefore the power which brings a stone to the ground, which keeps the moon in her orbit round the earth, the satellites of the planets in their orbits, and the planets in their orbits round the sun, are all classed as phenomena of the same kind, and called the attraction of gravitation. We may proceed further; and remembering that our own bodies are drawn towards the earth, which tendency is their weight, and that we are accustomed to measure many things by weight,—Has that weight any resemblance to the attraction of the sun, the planets, and their satellites? It is manifestly of the same nature with that power which brings a stone to the ground, which is its weight; but that is the same which draws the moon towards the earth, and the planets towards the sun. So that when a poor woman weighs out a pound of butter to sell it to a neighbour, she is availing herself of the same power which keeps the whole solar system in order, and which probably exerts its influence far beyond the limits of that system.

Reasoning as employed about external and material objects.

Reasoning is that process by which we discover resemblances or differences between phenomena which we cannot discover by direct comparison; or it is that process by which we prove to others that there are resemblances and differences between objects or phenomena of which they were not aware. It is founded on this proposition, which, although not intuitive, is so simple and evident as to need no proof, and to be capable of none, because no proposition can be found more evident than itself,—namely, that things which are like the same thing in any particular are like one another in that particular. Reasoning, therefore, is not an operation of the mind by which it discovers objects or phenomena previously unknown, but by which it classes objects or phenomena already known. The process consists in selecting some object or phenomenon which resembles those which we are examining in the same particulars, by which process the more distant phenomena are brought into comparison with one another, their similarity in that particular ascertained, and consequently their class determined. For example, I wish to ascertain whether there be any such resemblance between lightning and magnetic attraction as would warrant us to arrange them in the same class of phenomena. No two classes of phenomena could appear at first sight more dissimilar than the phenomena of the lightning of heaven, on the one hand,—its flash of light, the noise with which the flash is accompanied, and the destructive power which it exhibits,—and, on the other, the approach of two pieces of metal to one another without light or heat or noise, or the point of the magnetic needle taking always the direction of north and south. How can I bring them into comparison? I remember that by the friction of certain substances phenomena like those of lightning—the flash, the noise, and the destructive power—are exhibited; and also that, by the same means, the substances subjected to friction attract one another in the same manner as magnetic substances do. These phenomena, elicited by the friction of these certain substances, I call electrical; and I find that lightning belongs to the class of electrical phenomena, on the one hand, and that magnetism also belongs to the same class on the other. I, therefore, bring the two classes of phenomena — namely, those of lightning and those of magnetic attraction—into one higher class, namely, the class of electric phenomena. In this I am confirmed by observing, on the one hand, that clouds charged with lightning attract or repel one another as magnetic bodies do; and, on the other, that by a powerful combination of magnetic powers, flashes and shocks, like those of lightning, can be produced.

Or, to take an example from mathematics, the science of the measurement of matter and space, I wish to know whether any relation exists between the areas of parallelograms and of triangles, or to show that such a relation exists, and what it is. I bethink myself of the diagonal of a parallelogram, which divides it into two equal parts, both of them triangles. I thus learn that in this case the triangle is half the area of the parallelogram. But is this true of parallelograms generally, that every triangle is half of some parallelogram, and that every parallelogram is double of some triangle? The latter inquiry is decided at once by remembering that every parallelogram may be divided into two equal triangles by a diagonal,—each of them, of course, half the area of the parallelogram. To answer the former inquiry, I examine the properties of parallelograms, and find that if they be erected on the same, or an equal base, and be of the same perpendicular height, their areas are equal. I now have my answer in the affirmative; for I have only to assume one of the sides of any triangle as a base, and construct upon it a parallelogram of the same perpendicular height above that base with the triangle, and I have a parallelogram of double the area of the triangle. I then, by dividing a parallelogram into two equal triangles, discover the relation of each of these triangles to the parallelogram, and thus, by the help of that relation, discover the general relation between all parallelograms,—namely, that if they stand on equal bases, and are of equal perpendicular heights, the parallelogram is double of the triangle; from which follows, that if the base of the parallelogram be half that of the triangle, and of the same perpendicular height, or if on equal bases and half the perpendicular height, the two figures are equal, and so of any other proportion.

Syllogistic reasoning.

This also is a form of reasoning, that is, of comparing two objects which cannot be brought into direct comparison, by comparing both with a third object. But it adopts a peculiar method of finding that third object, or middle term, to which the two others are to be compared. It forms a class, or genus, consisting of all objects that are similar to one another in certain particulars, to the exclusion of all other objects. It then proceeds on the principle, that whatever is characteristic of the class, or genus, will be found in every species, or individual that belongs to it, which must necessarily be true; for if any species, or individual, did not possess the characteristic of the class, it would not be ranked under it. The middle term, therefore, in this mode of reasoning, is not a third object, with which each of the others is to be compared, but it consists of those particulars that characterise the class; and the point to be established by the syllogism, is always that the object under dispute or investigation does, or does not, belong to a certain class previously defined or understood.

Syllogistic reasoning, therefore, is not an engine for the discovery of phenomena, but merely (as all reasoning is) an engine for arranging under classes or genera phenomena previously known. The merits of syllogistic reasoning have often been misrepresented and underrated by viewing it as a means of discovering truth, which no intelligent logician pretends that it is. Phenomena are to be discovered solely by observation and induction; all that reasoning on them does further, is to ascertain their connections by arranging them into genera, species, and other divisions used in classification.

But some zealous Aristotelians assert that all reasoning must proceed by syllogism expressed or implied. This assertion, we apprehend, must be received with modifications and limitations. We doubt not that all absolute demonstration may be reduced to syllogism; for reasoning correctly by syllogism cannot but be infallible. If the class or genus that forms the subject of the major premiss be accurately defined, so that whatsoever possesses its characteristic attributes is included in it, and nothing else; and if it be ascertained that the object under examination, that is the subject of the minor premiss, possesses, or does not possess these characteristic attributes, then the conclusion infallibly and demonstrably follows that it belongs to the class in the one case, and does not belong to it in the other. Whereas, by a mere direct comparison of objects, sufficient evidence may be obtained to command belief; but no infallible demonstration can be attained.

But much important reasoning on every subject except pure mathematics is necessarily carried on that never aims at demonstration; indeed the greater part of our reasoning is of this kind. It would put an end to almost all practical reasoning to require the reasoners to begin by accurately defining genera and species. Suppose, for example, the object of inquiry, or of proof, is whether zoophytes be animals or plants. To treat the subject syllogistically, so as to arrive at certainty, the inquirer must commence by an accurate definition of what he means by plants and what by animals. And having the properties of the zoophyte in view, he might frame his definition so as to include these properties, or to exclude some of them. And thus one logician might prove it to be a plant, and another logician might prove it, by a syllogism equally conclusive, to be an animal. The dispute, therefore, between them is the major term. One says all animals have certain qualities or attributes; zoophytes have these qualities or attributes, therefore zoophytes are animals. The other retorts, all vegetables have such and such qualities, zoophytes have these qualities, therefore zoophytes are vegetables. They may then try what negatives will do. One says, no vegetable has attributes such as voluntary motion, zoophytes have voluntary motion, therefore zoophytes are not vegetables. The other retorts, no animal is fixed by a root to a particular spot, zoophytes are so fixed, therefore they are not animals. Thus, by the definitions that they adopt of animal and vegetable, they may prove them first to be both animals and vegetables, and then, with equal clearness, to be neither vegetables nor animals. We say nothing of the disputing of the facts stated on each hand, that is the minor premisses of the syllogisms, namely, whether zoophytes have the attributes alleged on either side; for it is not the business of reasoning to ascertain facts, but merely to class them when ascertained. Naturalists, as it appears to us, do not proceed by definitions and syllogisms to the determination of this point; but taking a general view of the characteristics of plants and animals, and leaving the definition of the classes animal and vegetable, to be afterwards determined if necessary, and perhaps to be modified by their very investigation of the nature of zoophytes, they proceed directly to compare zoophytes with animal properties on the one hand, and with vegetable properties on the other, and so, upon the whole, to form a mere opinion as to the class to which they should be allotted. By the name which they have given them, they confess their inability, in the present state of our knowledge, to fix their class; and the result may be that some zoophytes may come to be regarded as animals and some vegetables.

The Linnæan system of botany seems to be one which might be reasoned out by syllogisms. As, for example, all plants having so many pistils and so many stamens belong to a certain class and order, all lilies have that number of pistils and stamens, therefore lilies, &c. The natural system seems scarcely to be susceptible of definitions so accurate as to form the basis of syllogisms; but is formed by a direct comparison of each species to several orders and genera approximating in their general qualities, and the species is classed according to its greater similarity in the most important attributes with one genus rather than with any of the other genera.

Or, let us look at our former example of comparing lightning with magnetic attraction, by comparing each with electrical phenomena. To proceed syllogistically, the logician must begin by defining what precisely he includes in the phenomena of lightning. In this he will encounter some difficulty; for if he include light and heat, he will be in danger of including the phenomena of combustion. If, to avoid this, he introduce the notions of suddenness and violence, he would not so get rid of explosions, which are sudden and violent. He must also define what he means by the phenomena of magnetism, in which he would also find difficulty, as he might confound it in his definition with the attraction of gravitation or of cohesion. He must also define his middle term, electrical phenomena, and here he would encounter fresh difficulties; for if he included in it friction, he would exclude the galvanic or voltaic phenomena. But having got over these difficulties, he is prepared to march to his conclusion with infallible demonstrative certainty. Natural philosophers, however, would find the necessity of constructing such definitions as an intolerable hindrance to such inquiries. They, therefore, compare the general phenomena of lightning with those of electricity, and those of electricity with those of magnetism; and by observing the differences between these different classes of phenomena and those of combustion on the one hand, and those of gravitation and cohesion on the other, they, without pretending to demonstration, come to the opinion that lightning and magnetic attraction proceed from the same cause. Whether light, heat, combustion, gravitation, are or are not to be ascribed to the same cause, they leave to be determined by future discoveries of phenomena.

Reasoning on subjects in which mind occurs among the objects of it, will be noticed under a future division of our work.

The use of language in intellectual operations respecting external material objects.

We are not here to consider the use of language in communicating thoughts to others, or informing other minds, but to glance at its use in intellectual operations which have for their objects sensations and perceptions.

In classification names assist us in regarding a class as one defined whole, like an individual, different from all other individuals. We class objects we have seen by the resemblances indicated by the similarity of the sensations which they excite, separating them from other objects by their differences from them, indicated by the differences of the sensations excited by them. But without names for the classes, we should confound objects belonging to different classes, as often as we might observe resemblances between them, without attending at the moment to their differences. But the name of the class limits the attributes which characterise it, or the objects which belong to it by possessing these attributes, and enables us to recal the class without difficulty, and present it before the mind as one whole, of which the various objects that belong to it are parts, or, (according to another view), of which the various characteristic attributes of it are parts. The term "mammalia," for example, immediately suggests those animals that suckle their young as distinguished from other classes of animals, such as birds, fishes, reptiles, &c.; or it suggests to us those attributes that characterise the class of mammalia, as distinguished from other classes of animals. The name presents the class to the mind as one whole—an individual, and thus gives precision to our thoughts respecting it, and greatly aids us in determining what animals belong to it.

So the name "attraction" recals a particular class of phenomena as one whole, of which different kinds of attraction, as the attraction of gravity, the attraction of magnets, electrical attraction, are component parts, and prepares us for separating these different kinds of attraction, by their differences, into different classes, and for reasoning upon them.

Similar facilities are afforded by language in induction and reasoning. Names given to phenomena recal events in their connection of antecedents and consequents, or their relation of cause and effect, and enable us to compare them with the remembrance of other phenomena.

And as reasoning about external material objects is one mode of ascertaining or demonstrating the class to which any object or phenomenon belongs or does not belong, names given to classes of objects or phenomena are so important in all reasoning respecting them, that without such names the mind could scarcely arrange them under classes or genera.

The influence of language in imagination or conception.

We have introduced imagination or conception for the first time in this connection, because we are convinced that the operation or exercise of mind which is known by these names, as employed about material external objects, so far as it is different from memory, depends greatly, if not entirely, on the use of language.

We have heard conception or imagination distinguished from memory, on the ground that memory always includes the notion of past time, at which the remembered sensation or object was experienced or perceived. But former sensations, or objects formerly perceived, may be recalled to the mind without any notion of their having been previously in the mind; and surely it is not a sufficient reason for classing the same state of the mind, the same recalled sensation or perception, under different powers of the mind, according as it is or is not accompanied with the consciousness that it is a remembrance of what we have formerly experienced. Many scenes recur to the mind of which we cannot tell where and when we saw them, or whether we ever saw them, which yet are scenes which have formerly been subjects of thought in the mind. A particular scene is familiar to us, having frequently presented itself in dreaming, so vividly that we could draw it, which for a considerable time we could not remember when we had seen it, or whether we had ever seen it, till we discovered it to be a view from a rising ground near Portpatrick. Now, surely our subsequently making that discovery does not convert that power of the mind by which the scene presented itself to us from imagination to memory. It was memory all along, although it was not accompanied with the memory of the time and place where we originally saw it. Another scene which has presented itself to us, as connected with the city of Glasgow,—an elevated platform on the northern bank of the river, extending from the city down the river for a considerable distance, with footpaths and broken hedges running along it, interspersed with furze bushes, a scene which certainly does not exist in the neighbourhood of Glasgow, nor have we been able to discover where it exists, although from the distinctness with which it has more than once occurred in dreams, we are pretty sure that it is a scene which we have actually seen somewhere (we suspect, in the neighbourhood of Bristol). It is, we doubt not, the exercise of memory, operating by some law of suggestion, and connected with the name and some of the characteristics of the city of Glasgow. Several other scenes are familiar to us in the same way, which we cannot trace to any time or place; and yet we have little doubt that they are scenes which we have somewhere seen, either in realities or in pictures, or that they are made up of different scenes which have been present to the mind.

Now, this making up of scenes out of shreds and patches of different scenes, which we have actually witnessed, is what is called the power of imagination or conception, but which we believe to depend much, if not entirely, on the use of language, modifying the suggestions of memory. In support of this opinion, we offer the following observations:—

1. Conception or imagination introduces no new thought into the mind. It never passes beyond those perceptions that are stored up in the memory, ready to be recalled by suggestion. Those persons who have been most remarkable for the powers of imagination have never

broached anything new. If they had, they would have been as unintelligible as if they had spoken of colours to a man born blind, or of sounds to a man born deaf. The whole history of the human mind attests this fact. All the efforts of men to imagine a class of beings different from those with which they are acquainted have failed. The gods of the heathen are merely men, women, or beasts. Their supernatural beasts are made up of different parts of beasts with which they are acquainted. Dragons with many heads and birds' claws; Satyrs, partly goats and partly men; Centaurs, partly horses and partly men;—the feats of gods or of angels, as fancied by poets, are all of the earth,—earthly,—indicating that our souls are as incapable of disentangling themselves from the objects of sense as our bodies are of rising above the earth.

2. Without the use of language, our reminiscences would usually present themselves in the same connection in which the objects remembered have been actually perceived. We do not state this absolutely or universally, for it is possible that other operations of suggestion might recal detached portions of scenes which had been actually before the mind, and associate these detached portions so as to construct a new scene out of them. But we apprehend that this forming of scenes in the mind out of different scenes which we have actually seen would seldom take place without the use of language.

3. Descriptions in language of objects, or of scenes, call up images already in the mind; that is, already so connected with the mind by perception, as to be capable of being recalled to its consciousness. Graphic speakers or writers call up vivid pictures into the minds of others; but the picture is different in every mind. Painters can delineate, from their own mental pictures, the scenes suggested by graphic writers; but no two painters ever agreed in the delineation of any such scene. Such writers tell of mountains, seas, lakes, rocks, trees, rivers,

cottages, castles, men, women, cattle, wild beasts, and we fashion the scene after the pictures which we already possess : the mountains, seas, lakes, rivers, castles, cottages, are formed of the materials in our own minds, which these words recal, and we people them with men and women, beasts and birds, which we have previously seen.

4. Paintings furnish our minds with perceptions capable of being recalled nearly as real scenes do. They give us vivid conceptions of the scenes of other countries and climates. Let a poet or historian describe to us a battle, without saying to what nation the combatants belonged, and we shall have a picture in our minds of such soldiers fighting as we have been accustomed to see in reality, or in pictures. Let him add that it was among the Chinese, and the whole scene changes ; and if we have seen Chinese soldiers, or pictures of them, the combatants in our imagination assume the features and the dresses and weapons of Chinese soldiery. Paintings also furnish us with the conceptions that other minds have formed from written descriptions. In reading the narratives in the gospels, for example, instead of making up the scenes described from our own materials, we often have the conception of another mind recalled as embodied in some painting of the scene described.

5. Scenes brought before us by paintings are capable, like real scenes, of being broken up, and combined to form other scenes. Thus, in reading a description, we may have a mountain from one painting, a river from another, a cottage such as we have actually seen, with many other fragments derived from various sources, formed into one imagined scene, called up into the mind by verbal description.

6. When a whole scene is thus constructed in the mind, suggested, it may be, by description, or in any other way, it may itself become an object of memory,

and may rise up to the view of the mind, as a whole, as often as it may be recalled. This is remarkably the fact in those cases of combined or imaginary scenes that we have noticed as having occurred repeatedly in dreams. Several such fictitious scenes are in our minds, which can be recalled by suggestion, just as real scenes may.

7. One operation of the mind which is ascribed to imagination or conception as distinguished from memory, and often adduced as an evidence that the powers are essentially distinct, is the combining of different qualities in the same object which are never found combined in reality, and which therefore could never be recalled by memory; as when we think of a mountain of ivory, or a sea of gold. This power, we apprehend, depends solely on the use of language. We question whether any mind would ever have thought, or would have been capable of thinking of an ivory mountain, if it had not been in possession of the word ivory, signifying, not an elephant's tusk, but the substance, with its peculiar qualities, of which the elephant's tusk consists, and another word signifying a certain elevation on the earth's surface. But having these words, nothing more is required than to bring them into jùxtaposition, *ivory mountain*, or in a form more definitely to express their connection, *mountain of ivory*, to bring up in our minds the picture of a high elevation on the earth's surface constructed of the same substance with elephant's tooth. We question whether any mind ever could have thought of a sea of gold without the aid of two words signifying the expanse of water called sea, and the bright yellow metal called gold. On this, however, we would not dogmatise, because some effects of a rising or setting sun on the appearance of the sea might suggest to some minds, without the use of language, the conception of sea combined with that of gold. In that case, however, there would be nothing more than the phenomenon of

suggestion. Of some of these imaginary combinations, it would seem to be impossible that the mind could form any conception, even with the aid of language, as, for example, a sea of gold, like clear or transparent glass. For if it were transparent, like glass, it would not be a sea of gold; if it were opaque, with a metallic lustre, it would want one of the characteristic properties of transparent glass. Such an object, therefore, could never be seen, and could not be called up by suggestion. But the proximate position of the words pure, gold, clear, and glass, calls up a sort of varying image, like the play of some kinds of fire-works, in which brilliant colours blending and changing into one another, afford great pleasure by their combination and splendour.

Imagination or conception as exercised about the mental phenomena of other persons, will fall to be considered afterwards.

END OF BOOK II.

BOOK III.

RECOGNITION, AND THE PHENOMENA DEPENDENT UPON IT.

We use the term *recognition*, to signify our discernment of the existence and presence of other minds than our own. We have considered two sources of mental phenomena:—I. Sensation; II. The Perception of external material objects. We now proceed to consider a third, namely, III. The Recognition of other minds, and of their phenomena.

We are now, therefore, to elevate the mind to a still higher platform. We have contemplated it first in its solitary abode acted upon from without, and so aroused to life, and feeling, and activity, and exerting its powers on the sensations which external objects had awakened in it, but without the means of forming any conception of external objects, or of any being different from itself. We then contemplated it as endowed with a certain power over the body, through the organs of which it received its sensations, and thus as enabled to acquire the knowledge of external objects and of self; thus, also, as having the will called into exercise, and the notion of cause and effect acquired by it, with those emotions and intellectual operations that depend on its perception of external objects. We have now to introduce it to the world of kindred minds formed in the same image with itself, and to observe the new emotional and intellectual states to which this new knowledge gives rise.

CHAPTER I.

CONSCIOUSNESS.

The step by which the mind ascends to this higher platform is Consciousness. The word consciousness when used respecting a mere sensation, is the attention directed to the sensation and nothing more. When used of sensations as known to be excited by external objects, it includes the knowledge of the external objects that excite them. It extends also to the notion of self, to the notion of cause and effect, and to the exercise of the will, implying the attention directed to these mental phenomena. It is applied to present or former emotions, implying attention not only to the emotions, but to the occasions or causes of them, and to all present or past intellectual operations. Its application also extends hypothetically to the future, as when we say we are conscious, that if a near friend were to die, we should be overwhelmed with grief; or that, if we were deprived of our property or our income, we should be brought into great perplexity. In short, we can say we are conscious of a present sensation, or of the remembrance of one, we are conscious that it was caused by such or such an external object, we are conscious that it gave us pain or pleasure, that it excited in us grief or joy, that we could distinguish it from other sensations, and the object that caused it from other objects, and that we discovered certain resemblances between that object and other objects. When we apply it hypothetically to the future, it is more than merely prognosticating how we should be affected by certain events, because it includes the experimental knowledge of what those feelings are, which we can foresee the supposed events would awaken in us. It may be generally described as the notice which the mind takes of its own sensations and perceptions, the causes of them, its own intellectual operations upon them, and the emotions excited by them.

CHAPTER II.

THE DISCOVERY OF THE PRESENCE AND EMOTIONS OF OTHER MINDS.

THE manner in which the mind discovers the existence, presence, and states of other minds is as follows :—

1. It discovers that there are other bodies similar to that with which it is connected, which we shall call its own, with countenance, head, trunk, limbs, like its own. It is conscious that it is itself, by its own will, the cause of the movements of its own body, and in consequence of that intuitive persuasion which we have so often noticed, namely, that like antecedents are followed by like consequents; or, as it is now sometimes modified, that like causes produce like effects, and that like effects proceed from like causes; it naturally infers that these other living bodies, which it perceives to be like its own, and to exhibit similar motions to its own, are animated with and moved by minds similar to itself.

2. Besides this general inference, it is conscious that it exhibits certain states or movements within itself, by certain movements of the muscles of the body. The mouth, the eyes, and eyebrows, are particularly the means of expressing internal emotions. An infant draws the muscles of his mouth in a certain manner when he is pleased, and in a different manner when he is displeased, or in pain. In giving earnest attention to any object the mouth is open, and the eyes open, and directed steadily towards the object that engages the attention. If the object excite pleasure, the eyebrows and the sides of the mouth are somewhat elevated; if it give pain, the eyebrows are drawn down and forward; if the pleasure be new, the eyebrows are elevated; if the pain be new, the eyebrows

are drawn forward and elevated; and by the combining of these movements in various ways a vast variety of emotions is expressed. We are conscious that shame causes the blood to rush into the countenance, and creates heat and redness, or blushing; it also inclines us to bend down the head, and to look towards the ground. Anger disposes us to set the teeth and expose them, clench the fist and stretch out the arm, as if we intended to strike. We also indicate various emotions by various tones of voice. Strong emotions, pleasant or painful, are naturally expressed by loud tones, accompanied with violent gesticulations; and gentle emotions by soft tones; while the nature of the emotion, whether pleasant or painful, is indicated by the peculiar modulation of the voice. Some strong emotions, such as rage and indignation, or violent grief, swell the throat and produce a choking sound, and render the articulation indistinct.

Every man is conscious from his childhood, till the restraints of society may have taught him to keep under the expression of his emotions, that he indicates his emotions by these and similar movements in the muscles of the face and attitudes and gestures of the body and tones of the voice. They are common to all children and to all savages; and when he sees such movements in other countenances, such attitudes in other bodies, and hears such tones of other voices, he infers that there is a mind within the body, directing its movements, and expressing, by its command of the muscles of the countenance, the gestures of the body, and the tones of the voice, its own emotions; still founding his inference on his persuasion that like effects must be produced by like causes. Thus the mind, provided with the means of discovering the presence of other minds constituted like itself, and of discerning their emotions and the means by which these are excited, it takes its place in the intellectual and moral world—the world of mind.

CHAPTER III.

THE ATTENTION DRAWN OFF FROM THE MERE BODIES OF MEN, AND DIRECTED CHIEFLY TO THEIR MENTAL CHARACTER.

One important change that immediately takes place in the view which we take of the persons of other men in consequence of our recognising in them minds similar to our own, possessing the same control over their bodies which we possess over our bodies, is, that, instead of regarding their bodies merely as external objects, exciting in us certain sensations, pleasant or painful; and as mere material machines, that may have been the means of conveying to us sources of pleasure or pain; we learn speedily to view them as intimations of the presence of the mind that controls them. We learn from our own consciousness, that the body can exert no power but as the mind directs. Our attention, therefore, is diverted from the body, as it would be from a mere slave or drudge, to the master who can command the acts of the slave; because we have found that the effect which the body of another person may produce on our own pleasure or pain depends on the mind that governs it.

Our chief attention, therefore, comes to be directed to the mental character of those with whom we come into communication. The character of other minds, so far as it is fitted to affect us, consists of two elements,—namely, their power to do us good or evil, and their disposition or inclination to do us good or evil. In our very infancy, the study of the characters of others commences. Children soon discover that their parents possess full power over them, to deal with them as they think fit. This at once gives to the parents the highest importance in their eyes. As the parents are the sources of all comfort to the child, if they be kind and judicious, their affectionate look and demeanour is to him the very index of all that is pleasant. And as they have power to render the child miserable, if they be unkind and injudicious, their very presence is the index of pain, and annoyance, and restraint; and the unhappy child of such parents, as he obtains the use of his limbs, and increases in strength, becomes impatient of their control, and seeks refuge from them among other persons, young or old, that will permit him to associate with them on more comfortable terms. He becomes a stranger in his father's house, never entering it except when necessity compels him. A child is perpetually seeing objects which he thinks would gratify him if he possessed them. He has yet no idea of the laws of property, or of the mischief that he might do to property. This requires the constant exercise of authority, on the part of his parents, to restrain him within proper bounds. If his parents be firm, and yet kind, he readily learns to submit willingly to their authority, without being alienated from them; if they be firm, but not kind, he submits by restraint, but eludes the restraint as often as he can; if they be kind, but want firmness to compel his submission, he very speedily discovers their weakness, learns to look upon himself as their superior, and the little tyrant stamps and rages and commands till his wishes are gratified. Nothing can save such parents from the disregard and utter contempt of their own children.

The study of the character of those with whom we have intercourse, as it begins in early infancy, so it continues through life. At a very early age children speedily discover the power and the dispositions of those with whom they associate. We remember that an elementary teacher in Scotland, having occasion to be absent from his school for a few days or weeks, prevailed on a friend—a tall, gaunt, muscular man—to take charge of it in his absence. This friend, however, was totally unused to maintain the order of a school, and knew nothing of the management of children. They, of course, immediately began to test his power to maintain order among them, by trying how far they might proceed with impunity in getting into confusion. They soon discovered that, tall and formidable as he looked, he was infirm of purpose. The disorder rapidly gained ground. He attempted to establish his authority by flogging some of the children; but it was done without system or judgment; the innocent suffered, and the most active and cunning in the mischief escaped. They therefore were encouraged to proceed; all vestige of authority vanished, and the school became a scene of universal hubbub and confusion, when, to crown the whole, one little urchin, remembering that the window shutters were on the outside, slipped out, closed the windows, and added tenfold wildness and confusion to the scene by plunging it into darkness. The poor bewildered imbecile could only effect his escape. This thorough discovery of a strong man's weakness was made in a very few hours.

The two elements of character which draw the attention are, we have said, power to give pleasure or pain, and disposition or inclination to give pleasure or pain.

If a man have no power to occasion either pleasure or pain by the exercise of his will, he is disregarded, except so far as compassion or disinterested generosity may draw the attention to him. But he may have power of various kinds besides the exercise of authority. Let us, in the first place, consider these elements of character, as they appear to children.

In regard to power, mere strength of body gives importance in the eyes of children, because it implies power to injure them, or to protect them from injury. A strong man will always appear to be an important person to children, till they detect some weakness of character that neutralises his bodily strength, or till they discover that he is under the control of some other person, which incapacitates him from using his strength either for good or evil till he be commanded or permitted to use it. When that is discovered, then the importance attached to his bodily strength is transferred to the person who has power to control and command him. Property sometimes gives importance in the eyes of children to him who possesses it. The power of giving or withholding money, of opening fields to them, or shutting fields against them, makes him appear important. And as men who have property usually live in larger and handsomer houses than others, in some proportion to their wealth, and dress more expensively than the poor, the occupying a larger and finer house, the more expensive dress, and the general appearance of having the command of more money, become so many signs of power, and consequently causes of importance. The power to communicate, the reputation of knowing a great deal, and thus of making children acquainted with what are novelties to them, is another source of importance in the eyes of children. An intelligent and communicative parent or teacher thus attains to an importance in the estimation of his children or pupils, which mere authority could never confer upon him. Even a person of wit and drollery, who knows how to excite their laughter, which is in fact the power of communicating pleasure of a certain kind, will appear to them to be a person of importance. We can well remember also the sort of reverence with which we used, in childhood, to regard good fifers and drummers in recruiting parties, and the ambition we felt of being like one of them. We still retain in pretty old age a vivid remembrance of the appearance of some of these personages.

Having formed some estimate of the power of any individual either for good or evil, the next point to which children direct their attention is, his disposition towards them. Of this they take their first impression from the aspect of his countenance, and from his manner of addressing them. If he have a benevolent, kind look and manner, they become persuaded that he will employ his power, whatever it may be, to give them pleasure. If his look and manner be repulsive, they regard him as one who would do them injury, that is, who would inflict painful sensations, or withhold from them the means of pleasant sensations, and they avoid him. If, notwithstanding his bland look, he occasion to them painful sensations, or if, notwithstanding his cross aspect, he occasion to them pleasure, they soon reverse their judgment, and regard the bland and smiling person as the malignant one, and the cross and forbidding person as the kind and benevolent one. The disposition of every individual, therefore, comes ultimately to be estimated by his actually occasioning pleasant or unpleasant sensations, perceptions, recollections, or feelings of any kind.

The principles on which persons of mature understanding form their estimates of the character of those with whom they have intercourse, are so identical with the principles upon which children form theirs, that it seems scarcely necessary to dwell upon them. There are, however, some variations which it may be well to notice. The elements of character as estimated by adults and by children are precisely the same,—power, and disposition to use that power for good or evil.

The kinds of power to which adults look as giving importance to the possessor of it, are the same as in children, but modified in the details. In ruder states of society, bodily strength is one principal source of power, and therefore confers importance on the possessor of it. As society advances in civilisation, mind gains the ascendancy over the body, because men discover that there are qualities of mind that give to a man more power to do good or to do mischief—that is, to cause pain or pleasure—than bodily strength. The nature of the pleasure or pain to which importance is attached by children or by adults, is much the same. Children dread being flogged, confined to a school-room for a few hours, being deprived of toys, or of liberty to gambol in the open air. Men also dread the lash, and confinement in prison, or elsewhere, being deprived of their sources of amusement, or restricted in their liberty of ranging the open country. Children who are poor entertain the highest conceptions of the power of those who can give them food and clothing and fuel. If they be brought up in more comfortable circumstances, these things are provided for them so regularly as scarcely to attract their attention; and it is only when they feel the want of them, or have some fault to find with them, that they regard the power of providing or withholding these things from them as evidences of power in their parents. But in adults the range of the power appears widened. It may imply power of giving or withholding employment, which may be tantamount to affording, not only to the individual himself, but to a whole family, the pleasurable sensations which the necessaries and comforts of life create, or withholding these, and virtually inflicting the pains of poverty. It may imply the power of helping others forward to prosperity, or hindering and depressing them; which, again, is equivalent to affording or withholding pleasant sensations or perceptions. Sometimes the power which attracts attention is the power of inflicting death, or of protecting from it. The power estimated highest is that of commanding armies, and, on the one hand, of ravaging countries by means of hordes of ferocious soldiers, sacking towns, and thus creating a prodigious amount of misery, all resolvable into painful sensations—the pain of wounds, of hunger, cold, confinement, loss of near and dear relatives, or grievous injury done to them, destruction of property, and privation of liberty, and of all comfort; or, on the other hand, the power of affording protection from these injuries.

Official rank, as of magistrates, communicates a power, which is estimated as children estimate the power of parents and teachers. That power in rude states of society is usually procured by the same means as military power, and accompanies it. In more advanced society it is regulated by law; and those who hold magistracies are deprived of much, if not of all, that was originally arbitrary in them. Still a man who represents the law, and pronounces its awards, and has power to carry them into execution, is the instrument of inflicting painful sensations on some, and of protecting many from the painful sensations that would be experienced in a lawless state of society.

Property also confers power of occasioning pain or pleasure of various kinds; some more slight and transient, some more permanent and important. Property implies the power of directly bestowing the means of obtaining pleasant sensations, or of withholding such means; and it gives power to engage the services of others for the benefit of those whom the person possessing it may desire to favour or to injure.

Learning and other mental acquirements give power to communicate the pleasure that is connected with all new information. Poetical or oratorical genius gives power to communicate the pleasure arising from the perception of new unexpected similarities and analogies among various objects, and of calling up by suggestion pleasant trains of thought, or if mournful trains of thought, yet rendered pleasant by their being recalled in a mitigated form. For painful or mournful events, when recalled, afford pleasure; partly because much of the pain by which they were originally accompanied has passed away, and partly because the consciousness of being now freed from pain which we formerly endured, or of being exempt from pain which others have endured, is a pleasant consciousness. We never so much enjoy a snug room and comfortable fireside, as when we hear a storm of hail or snow battering the windows without.

We are never so thankful for health, or freedom from pain, as when a vivid picture is presented to us of the pains of a sick-bed, or the anguish of the wounded on a field of battle, or when we think of the pain or agony which we ourselves formerly suffered, but from which we have been delivered. Wit gives the power of presenting new and unexpected analogies and relations among objects not before observed, particularly strong and unexpected contrasts. It also gives the power of inflicting mental pain, by exposing a man to contempt and laughter, which he feels as depriving him of a portion of his own power and importance. Skill in singing, or in playing on musical instruments, gives power to communicate pleasant sensations, and, by the natural language of music, to awaken a great variety of emotions, some of them mournful, but pleasant from the causes above alluded to. Similar observations are applicable to skill in painting, skill in mimicry or acting, skill in dancing: all derive their value in the estimation of some class of men, and the importance which they confer in their eyes on the person who possesses them, from the power which they imply to communicate pleasant sensations, or to recal pleasant remembrances, to present or to suggest new, and therefore, for the time, pleasant perceptions of relations among external objects.

Men, therefore, seek to possess themselves of some one or other, or of more than one, of these descriptions of power; because, unless they possess power of some kind to convey pleasure, or to inflict pain, whatever may be their dispositions, they are necessarily destitute of all importance in society, and will be either wholly neglected, or subjected to insult and injury. The most effective power, we have said, in a rude state of society, is bodily strength, accompanied with personal bravery; but even in the most polished or cultivated states of society, military prowess continues to be the most effective, and, therefore, to be the most eagerly coveted.

And some, when opportunity has offered, have recklessly caused a frightful amount of human suffering, merely to establish a reputation for great power, which they might afterwards use as they might please, for causing pain or communicating pleasure. The itching which sovereigns have usually betrayed for obtaining despotic power, and the desperate and bloody efforts which they have made to obtain it, or to retain it, has its origin in this desire of importance. Other species of power, such as that which accompanies property, official authority, learning, wit, talent for poetry, painting, music, mimicry, acting, dancing, and such like accomplishments, are all pursued by different individuals for the same purpose; namely, of obtaining importance in society, and thus giving value to their disposition towards others, either for good or for evil.

The other element of character which arrests attention, is the disposition of the person who possesses power to use it for good or for evil, or perhaps to make no use of it. In regard to this element, little needs to be added to what has already been said of it as estimated by children. If a man possessing power of any kind, strength of body, command of other men, riches, learning, and the rest, have a kind and bland manner of address, it is regarded as *primâ facie* evidence of a disposition to use his power for the purpose of communicating pleasure; if his aspect and address be rough and forbidding, men form their first judgment of him accordingly. This first judgment may be altered by experiencing or observing the use that he actually makes of his power. If, with his bland and pleasant manner, his acts generally occasion pain of some kind, or if he hold out expectations of good which are frequently disappointed, then the prepossession in favour of his goodness gives way to a persuasion of his malignity or hypocrisy. And so the man with the rough exterior may, if it be found that his acts generally communicate pleasure, come to be regarded as the kind and benevolent man. If a man, with the reputation of being rich, make no use of his riches, either to give pain or pleasure, he is regarded with indifference, or rather with dislike. For the pleasure which he has power to impart is contrasted with his barrenness in that respect, and he is regarded as, to some extent, the author of the pain that he might have relieved, or the want of comfort that he might have supplied. And here we have often occasion to observe a strange self-deception. A man covets and heaps up riches solely for the sake of the power which they impart to him. They are to render him important in society. And yet, by his not using them, he sinks into utter neglect and insignificance; and frequently such persons have been robbed and murdered, because no one was taking any interest in them. If a man use his riches to give annoyance to others, he is regarded as a person of malignant and mischievous character, whose presence is dreaded and avoided in proportion to his power. The power arising from wit or from poetical or oratorical genius may also render a man an object of dread and dislike, on the one hand, from the mental pain that he occasions by exposing men to contempt, and so lessening their own power; or of admiration and love, on the other, from the mental pleasure that he communicates.

CHAPTER IV.

MEMORY, AS EXERCISED ON RECOGNITIONS.

One addition to the laws of suggestion or of memory that the mind acquires by its knowledge of other minds, is that the mental characters or qualities of men—ourselves or others, suggest the remembrance of persons possessing similar or contrary mental qualities or characters. One powerful man may suggest the remembrance of another powerful man, or perhaps of a man without power. The idea or recognition of one rich man may suggest that of another rich man, or it may be of a very poor man ; and so of all the attributes of character, the various kinds of power and diversity of disposition—learned men, brave men, skilful men, musicians, painters, wits, mimics, actors, dancers, and also benevolent men, malevolent men, humane and cruel men—suggesting the remembrance of one another or of their contraries.

But the most important addition to the laws of suggestion that is required by means of recognitions, is, that certain resemblances or analogies are discerned between mental qualities and qualities of matter which are incessantly suggesting one another, or suggesting their contraries. This is manifest from forms of speech current in all languages. Thus we speak of mental character as being cold, or hot, or warm, or lukewarm, or hard or soft, or rough or smooth, or high or low, or great or little, or sharp or blunt, or sweet or sour or bitter, even as having breadth or depth, as being dark or transparent, or splendid, as fair or foul, long-headed, soft-headed, clot-pated, heavy-headed, light-headed, and innumerable others, that are often intelligible as rapidly as the words are pronounced; indicating that the mind naturally discerns and appreciates such resemblances or analogies. On the other hand, mental qualities are often ascribed to material objects, and movements among them. We speak of a raging tempest, a smiling landscape, a bold rock or precipice, a placid stream, of gay or grave colours, lively, deliberate, wild, capricious motions, melancholy or animated or cheerful sounds, and a thousand other similar expressions continually occurring. It is true that most or all of these words expressive of mental qualities are derived originally from material ideas, as perhaps all our words denoting mental qualities are. But in these cases they are not used with reference to the material reality which they originally expressed, but to the mental state or quality which they were afterwards used to express. For example, the word *repose* originally conveyed the idea of a thing replaced in some former condition, or laid down, or laid aside, from which it came to express rest after weariness of body, thence extended to mental rest; but having thus obtained a fixed and generally known signification in regard to mind, and perhaps its original material application being forgotten, it is again, through mind, applied to matter, as when we speak of clouds reposing, a landscape lying in repose, as if in a state of pleasant rest, the repose of a picture. These suggestions are sometimes viewed as the operation of imagination, regarded as a distinct power of the mind from memory; but they seem to be nothing more than that discernment of resemblance or analogy between mental and material qualities upon which all language respecting mind is founded. The words *understand*, *substance*, *suppose*, *hypothesis*, all contain the same material meaning of standing or being placed under; but they take their different meanings from certain resemblances or analogies which were observed between those material significations and the mental ideas now expressed by them.

One very important operation of the laws of suggestion comes into view at this stage of our investigation; namely, that the presence or the remembrance of any work in which the mind of man has been employed, immediately brings up the remembrance of mind as having been employed in planning it, or executing the plan. If a machine of any kind be presented to any intelligent person, in the contriving and constructing of which the ingenuity of any man has been engaged, he instantly thinks of the constructor of it. We seek to discern the intention of the contriver of the machine,—for what use it was constructed; we examine its various parts, consider the purposes which they are intended to serve; we detect error in this part, or ingenuity in that; we detect deep science in one contrivance, and great experience in another. In short, when we are examining the machine, and our attention seems to be intently fixed on the outward materials and forms of its various parts, we are conversing all the while with the mind of the man who constructed it; criticising him, admiring, censuring, applauding, drawing inferences from it, as to the extent of his ability and information or perseverance. When a child looks at a picture, he thinks of nothing but the forms and shades and colours in it, and pronounces it to be the picture of a man, or a house, or a tree, or whatever else it may appear to be: but the thoughts of a man who has some acquaintance with the art of painting are carried beyond the picture to the artist; his intention in it, and the success with which he has carried his intention into effect; his drawing, his management of light and shade and of colour, so as to produce the effect that he intended to produce. In hearing a piece of music, those who are incapable of being affected by musical expression think only of the successions of sounds, or of the combinations of sounds, or, at farthest, on the skill and dexterity of the performer. But those who feel as the composer intended they should feel, immediately enter into communication with the composer's mind, while they listen to the sounds dictated by him, adverting from time to time to the performers, to notice their perfect or imperfect conveyance of the composer's intentions. But their thoughts are chiefly engaged in appreciating the conceptions of the composer, and participating in the feelings which he expresses in the language of music. They are conversing with the minds of Handel, or Corelli, or Haydn, or Mozart, or Beethoven, or Weber, accompanying them in their transitions of feeling from the gay to the grave, from the sublime and the terrible to the elegant, the tender, the pathetic, or the rapturous, as expressed in their wonderful compositions. In reading a poem, also, the thoughts are but little employed on the language or versification, or even upon the imagery of the poem; but, if the poem fulfil its end, are irresistibly carried on to the mind of the poet, to accompany him also in his grave or gay moods, his lofty flights, or his elegant trifling, or his deep-toned pathos, or sensitive tenderness. If the poem was effective, we may look back upon it to observe how the effect was produced; or, if ineffective, to observe the causes of the failure; and may thus have our thoughts turned to the language, the versification, the rhyme, and the imagery, that we may judge of the poet's skill, and qualify ourselves to commend his excellencies, or to censure his defects.

CHAPTER V.

THE EMOTIONS, AS CONNECTED WITH RECOGNITION.

We have already considered those emotions which may be excited by mere sensations, and by the perception of external objects. We now come to those that are excited by our recognition of minds constituted as our own is, and therefore subjects of the same mental phenomena. As introductory to the explanation of these emotions, we make the following observations:—

1. Being ourselves conscious that we can be, and often are, the intentional causes of pleasure or pain to others, and having discovered other minds similar to our own, we infer that they also can be, and often are, causes of pain or pleasure to others, and it may be to ourselves.

2. Being conscious of certain emotions in ourselves towards others, such as love, hatred, gratitude, anger, admiration, contempt, and others, expressed by us in a certain way, by our countenance, our gestures, and also by our language, and prompting us to acts intended to

give pleasure or pain to others. When we observe similar expressions of emotions in others, excited by similar causes and similar acts done by them, in connexion with these expressed emotions, giving pain or pleasure to others, perhaps to ourselves, we infer that the pain or pleasure are intentionally caused by them, under the influence of their expressed emotions. Even where there is no expression of the emotion, if we know that events had occurred that would have excited such emotions in us, and would have prompted us to acts similar to those which we witness in them, we infer that the emotion does exist in them, and that their acts are prompted by it.

3. Having discovered that not the individual acts, but the character of the person, (that is, his power to do good and evil, and his disposition to do good or evil to others and to us,) is that in them which is of most importance to us, many of our emotions towards others are excited, not so much by their individual acts, as by the estimate that we form of their habitual character. And that estimate may be formed by witnessing the expression which they give of their emotions or their acts, or by learning from others their sayings and doings, and the estimate which others have formed of them. We may be *grateful* to a man who bestows a favour on us; but unless we can regard it as the indication of a kind and benevolent disposition, or a particular regard to us, we shall not *love* him. We may be *angry* with another for injuring us; but unless we regard the injury as the indication of a malignant disposition, or of ill-will to ourselves, we shall not *hate* him.

We now proceed to notice those emotions that are founded on recognition.

A man who has power to do good, or to do evil, commands, as we have seen, attention and deference in proportion to his power.

If, with his power to do good or to do evil—to promote happiness, or to cause misery—he manifests a disposition to do good, we *respect* and *esteem* him.

If, with such power, he manifest a disposition to give pain to others, he is regarded with *dread* and *aversion*.

Contempt is the emotion with which we regard a person who has little or no power to cause pain or pleasure, especially if he pretend to such power.

Anger is the emotion with which we regard a man who carelessly or intentionally gives us pain, or deprives us of what gives us pleasure, or of what would give us pleasure if we possessed it; and our anger is proportioned to the amount of pain that he inflicts, or of pleasure of which he deprives us, modified also by the degree of carelessness or of malignant feeling manifested by him.

Gratitude is the emotion with which we regard a person who has intentionally given us pleasure; and it is proportioned, like anger, to the amount of the pleasure received, combined with the degree of kindly feeling towards us with which we believe him to be influenced.

Hatred is the emotion with which we regard a man, who, with power to give pleasure or pain to others, chooses to give pain; heightened, if he has manifested that malignant disposition towards ourselves, and modified by the degree of good withheld or of pain occasioned, and the degree of malignant disposition with which we believe him to be actuated.

Hatred is often excited in the breast of a person who has injured another towards the person whom he has injured. That seemingly unnatural feeling originates in several causes. The remembrance of the pain inflicted is painful, rendered much more so by the consciousness that we were the cause of it; and from our own self-love, we perversely lay the blame of the pain of that consciousness on the person who suffered the injury. Another source of this feeling is, that having given cause to the person whom we have injured to dislike us, and to seek to be revenged on us, we regard him as an enemy, who would injure us if he could. And if we be conscious that under such provocations as we have given him, we could never rest till we had retaliated the injury, we ascribe the same unappeasable thirst for revenge to him. Every recollection of him, therefore, is connected with a suggestion of danger, and that unpleasant suggestion being constantly connected with him, creates in us a settled dislike to him. A person who can from the heart forgive an injury, can, after making all the reparation in his power to the person injured, lay aside all such suspicion, and dislike grounded on it, because he is conscious that if he had been the injured person he would have been satisfied with the reparation that had been made.

Love is the emotion with which we regard a person who, having power to do good or evil, to inflict pain, or to give pleasure or save from pain, chooses to do good to others; heightened by the amount of the pleasure which has accrued to ourselves, and modified by the amount of the good which he has done, or the evil which he has warded off, and the degree of kindly feeling by which we believe him to be influenced.

The *love* of parents to their children,—is it an innate instinctive emotion, or is it an emotion excited by anything in the children, or in the nature of their connection with their parents? Without absolutely deciding against some innate natural affection, especially in the mother, we would only observe that there is much in the children themselves, and in the circumstances in which they come into connection with their parents, that is calculated to draw forth the tenderest affection of the parents towards them. The utter helplessness of infants, when first cast on the care of their parents, and their being their absolute property, does much to draw their affections towards their infant children. Then the general resemblance which children bear to their parents, and to their near relatives, the mother discovering in the infant a likeness to herself, or to her own parents, or sisters, or brothers, or to her husband and his relations; and the father discovering similar resemblances to himself, or to those whom he loves, gives a power to the infant of awakening trains of interesting remembrances. The beautiful arrangement by which the infant receives its first nourishment from the bosom of its mother, who must necessarily clasp it in her arms, the natural expression of tender love, is wonderfully adapted to engage her love to her little one. Then the gradual development in the child of a mind similar to their own, feelings in which they can sympathise, mental qualities in which they can discern new resemblances to themselves, or each to the other, or to near and valued relatives, rivet and increase the attachment of parents. Then the smiling faces and buoyant spirits of children, constantly suggesting ideas of happiness; and these pleasant thoughts, heightened by the knowledge that they themselves are among the chief causes of all that hilarity by their kind treatment of them, render their children a constant source of pleasure to them. The occasional sufferings of children also, and the deep sympathy in their distress which is thus awakened, together with the patience and submission with which well brought up children usually bear their distresses, still more twine the affections of parents round their children. And, finally, the children, gradually recognising them as the sources of all their enjoyments, their comforters in all their ailments, their protectors from all danger, and incessantly applying to them for everything they require, and complying with their directions, often anticipating their wishes,—all add another and another golden link to the chain that binds the hearts of parents to their offspring. All of these circumstances in the intercourse of parents with their children seem to be sufficient to account for the phenomena of parental affection, without having recourse to anything innate or instinctive. For where these causes of affection are absent, or exist but imperfectly, as when infants are not nursed by their own mothers, are seldom seen by them, or when their parents keep them at a distance, so that they neither become acquainted with the minds of their children, nor their children with theirs, then parental affection is proportionally weakened, till, where these alienating measures are carried to the extreme, it ceases altogether.

There has, we conceive, in regard to this, as to some other phenomena of mind, been too strong a disposition manifested to run to innate principles and propensities, and too little attention paid to the circumstances in which the human race are introduced into this place of their residence, and into the society of their fellow men, and the influence which these circumstances are adapted to exert upon them.

The love of children to their parents certainly has nothing in it intuitive or instinctive, as is manifest from their readily attaching themselves to any one who cares for them tenderly and affectionately, and that often in preference to their own parents. One is rather disposed to be mortified to see how soon the most affectionate mother or father is forgotten by their children; even by children much advanced beyond the age of mere infancy. But it is a wise provision that, when God may see fit to call away the parents, the children are ready to cling to any others who may be employed and disposed to fulfil the duties of parents towards them.

Anger and *hatred* (which is a kind of settled habitual anger) kindle a desire in the subject of them to do injury, or at least to inflict suffering of some kind on the objects of these passions. The use of that desire is to deter the person who has excited our anger or hatred by injuring us, from repeating the injury by the dread of injury to himself, or to deprive him of power to injure us.

Revenge is the desire to inflict some injury on the person who has injured us, which desire is proportioned to our estimate of the injury, and modified by our own disposition, and also by the character and circumstances of the object of our revenge. The pleasure which the injuring the object of revenge creates, consists partly in the sense of safety which it seems to procure ; but it is often mingled with other feelings by which all consideration of safety is overpowered, and is often indulged under circumstances that increase the danger of further injury to an unlimited extent. Many persons have exposed themselves to certain death, nay, and to death under the most dreadful agony, for the gratification of their revenge.

Gratitude and love excite a desire in us to give pleasure to the object of them, proportioned to the amount of the pleasure which he has occasioned to us, and modified, as in other emotions, by the degree of our own susceptibility, and by the circumstances of the person who has deserved our gratitude. One cause of this desire to give pleasure to those who have afforded pleasure to us is, that witnessing the expression of pleasure in others, recals pleasant recollections to our own minds, unless that effect be prevented by our hating the person whose expression of pleasure we witness. But in the case of a person who has given pleasure to us, dislike or hatred to him is not likely to exist in us ; and, therefore, we can participate in his gladness, by enjoying the pleasant recollections which the witnessing of his gladness suggests to our own minds, these pleasant remembrances being heightened by the consciousness that we ourselves are the causes of his gladness. Whether there be any other sources of the desire to requite those who have ministered to our happiness by ministering to theirs, we are not prepared either to assert or deny, but no others occur to us at present. Some may think that the disposition to requite injury with injury, and benefit with benefit, is born with us, and is intuitive or instinctive. We may have occasion to refer to this afterwards; at present we would leave the question open for consideration.

The notion of personal identity, or self, which the mind necessarily acquires as soon as it discovers the existence of objects external to itself, and especially when it discovers the existence of other minds similar to itself, gives rise to several other emotions, each varying in intensity, according to the intensity of the pleasure or pain contemplated by them, and by which they are excited, and modified by the aspect in which we regard the person or persons who are the objects of them.

Self-love seems to be nothing more than the pleasure of pleasant sensations, exciting the desire of the continuance or repetition of them, and the pain of painful sensations, exciting the desire of being freed from them, or of avoiding the repetition; and these desires extended to the external objects, whether material or mental, which cause these pleasant or painful sensations respectively.

Selfishness is the same desire of prolonging or obtaining pleasant sensations or emotions, and of escaping or avoiding painful ones, but accompanied with a disposition to gratify these desires at the expense of other persons. In a sound, healthful state of mind, witnessing the pain of others will necessarily give pain to ourselves, because it will recal painful sensations, or objects causing such sensations to our own minds; but if we be so intent on any pleasure which we desire, that we pay little or no regard to the pain which the gratifying of our desire may cause to others, we are selfish. And the amount of our selfishness will be measured by the amount of the pleasure that we desire, as compared with the amount of pleasure of which we deprive others, or the amount of injury that we inflict on them; that is, the smaller the pleasure that we desire for ourselves, and the greater the injury, the greater the number, duration, and intensity of painful sensations or emotions, which the gratifying of our desires may cause to others. One who, to gratify the desire of any pleasure, deprives his neighbour of a greater pleasure, is selfish. One who, to gratify the desire of any pleasure, will put his neighbour to pain, is more selfish, and still more selfish in proportion to the pain or injury that he inflicts. One who, for a trifling momentary pleasure, inflicts on him the greatest possible injury, deprives him of his character, or of his life, is intensely selfish.

Generosity has its foundation in the pleasure which the witnessing of gladness in others excites in our own minds. If we take so much pleasure in witnessing the gladness of others that we deprive ourselves of pleasures, or of the means of obtaining them, that we may gladden the hearts of others, we are generous. If we make great sacrifices of the means of enjoyment to give enjoyment to others we are very generous. The measure of generosity, therefore, seems to be the greatness of the enjoyment which we sacrifice as compared with the smallness of another's enjoyment for which the sacrifice was made. It is possible that a man might carry his generosity to a foolish or even a culpable extent, as if he were to hazard or sacrifice his life to relieve another person from a temporary pain, or produce for him a temporary pleasure. Still, although he might be foolish and even culpable in doing so, we could hardly refuse to pronounce him intensely generous. This emotion also is modified by the character and circumstances of the person who is the object of it. To be generous, for example, to one who has gained our affection by contributing much to our happiness, is an inferior exhibition of generosity to that which has for its object one who has given us reason to dislike him by intentionally injuring us. "Scarcely," says St. Paul, "for a righteous man will one die; yet, peradventure, for a good man some would even dare to die; but God commendeth his love towards us in that while we were yet sinners (that is, enemies, as he afterwards explains) Christ died for us." For to be generous to one who has injured us, requires us to overcome the natural desire to requite the injury that he has done, by injuring him, before we can take pleasure in witnessing his happiness.

Avarice is the emotion with which we regard the means of procuring enjoyment *which we possess,* when we so cling to them that we cannot part with them to relieve the distress of others, or even to procure those enjoyments for ourselves which they might command.

Covetousness is the emotion with which we view means of enjoyment which we do not possess, and desire to possess them, more marked if we see these means in the hands of others.

Envy is the emotion with which we view a person whom we hate, in possession of some means of enjoyment that we love and desire. If the mere circumstance of his possessing the means of enjoyment that we desire, however lawfully and justly, is the cause of our hating him, then the emotion is of a still more malignant type. It is the character of the mind of the first murderer.

Compassion, on the contrary, is the emotion with which we regard a person whom we love, affected by something that we hate as a cause of pain or unhappiness of any kind. If the affection has been created or augmented by witnessing the pain or distress of the person whom we compassionate, then the compassion is the more pure and perfect.

Jealousy is the emotion with which we regard a person who we fear is about to obtain possession of some means of enjoyment which either we do not possess but desire to obtain, or which we already possess and desire to retain. It is compounded of desire of enjoyment, dread of not obtaining it or of losing it, hatred of the person who seeks to deprive us of it, and envy in anticipation of seeing him in possession of it. There are various causes of modification of this compound emotion —such as whether the means of enjoyment in question have ever been in our possession, or whether we are only desiring what we never possessed ; whether we previously had any dislike to the person of whom we are jealous ; the estimate that we form of the enjoyment that we desire. When a man is agitated by such a combination of emotions all directed against one object ; when such passions as love and hatred, desire and fear, are all intensely at work at the same time, and all made to bear against one object ; when love itself—the love of the enjoyment—is made to add new bitterness to hatred, and desire is made to add new urgency to fear, and that fear still more embittering our hatred of the person who threatens to deprive us of what we love, and whom we dread to see in possession of it, an intensity of malignity is the result, that often produces terrific effects.

From the notion that we have received of cause and effect, combined with our perceptions of an external material world, and our recognitions of an external mental world, are derived some important compound emotions.

Self-approbation or *self-gratulation* is excited by remembering means of enjoyment which we are conscious we bestowed on others.

Remorse is excited by our remembrance of pains endured by others of which we are conscious that we were the intentional cause.

This is natural conscience with respect to other persons,—that is, conscience irrespective of education or religious principle. It is the remembrance of the pleasure or pain, the benefit or the injury of others, accompanied with the consciousness that we were the intentional cause, mediately or immediately, of that pleasure or pain, benefit or injury. The emotion is capable of being modified by many circumstances—such as the amount of the pain or pleasure which it contemplates; the extent to which our will or intention was the cause of the pain or pleasure, and the aspect in which we viewed the persons who were the subjects of the pain or the pleasure on which our conscience is exercised. In regard to this last modification, if, on the one hand, the pain inflicted by us was the gratification of revenge, the gratification of that passion may counteract the pain which the remembrance of the pain wilfully inflicted on a fellow man would otherwise occasion. If, on the other hand, the person to whom we occasioned pain was one whom we loved, that remembrance will increase the pain with which we look back on the pain that we intentionally inflicted upon him.

Conscience, in this view of it, includes not only the remembrance of the actual suffering or happiness that we may have occasioned to others, but the remembrance also that we were the intentional causes of that suffering or happiness. If then, on the one hand, good should have resulted from our evil intentions, that might mitigate the regret with which we remember the intention, but it will not absolve us from the consciousness of the evil that we intended. If, on the other hand, evil has resulted from our good intentions, we shall still be pained at the suffering that we have occasioned, but we shall be in some degree relieved from the pain of that painful remembrance by the consciousness that we were not in fault.

It is scarcely necessary, we trust, to remind the reader that we have not entered on the consideration of the moral good or evil involved in our emotions. We have simply sought to investigate their nature, origin, and combinations. The moral good and evil of them may, if it please God to award to us a little longer time on this his footstool, form a part of the subject of a future Essay.

CHAPTER VI.

SYMPATHY.

Sympathy is the pain or pleasure that we feel on witnessing the pain or pleasure of others. These phenomena have been regarded by some writers as originating in an innate peculiar faculty of the mind. They seem, however, to be merely a particular exercise of memory guided by the laws of suggestion, frequently modified, however, by the intermingling of other emotions.

When we see anything affecting another which we are conscious would give us pain if it were to affect ourselves, it forcibly brings into the mind the pain which we should suffer from it, but modified, as in all cases of the suggestion of pain. No one has ever, we believe, seen a surgical operation performed on another for the first time without shrinking, as if the incisions were inflicted on himself, and many have fainted at the sight. The suggestion of pain is rendered more vivid by the contortions of the patient's countenance or the cries of anguish uttered by him. If a man, who cannot bear to look from a precipice, see another person approaching one, he recoils and trembles, and perhaps perspires with terror, as if it were himself that was approaching the precipice.

That this suffering with others is merely the operation of the laws of suggestion, and not a distinct power or faculty of the mind, is, we conceive, proved by its exhibiting the ordinary phenomena of suggestion. For example, we sympathise most deeply with a pain or sorrow which we have ourselves experienced. A person who has suffered from toothache sympathises most with those who are suffering under that torture—others frequently make light of it. So with gout and other pains which are not regarded as dangerous to life. Parents who have experienced the loss of children sympathise most tenderly with those who have been visited with a similar bereavement. And the sympathy of such parents is proportioned to the grief which they themselves experienced on the loss of their own children. The bereavement suffered by others could not recal more grief than themselves felt. On the contrary, if they see parents more overwhelmed by the loss of children than they themselves were, they do not sympathise with that excess of sorrow, but rather wonder that any persons should be so agonised and prostrated with a stroke which they could bear with comparative equanimity. Again, the frequent witnessing of the same cause of pain to others deadens the emotion of sympathy, according to that general law of suggestion, that all causes of pain or pleasure are diminished in their effect by repetition. Surgeons who frequently perform operations, and students who frequently witness them, lose all sympathy with the patient, while they are becoming on every repetition better acquainted with the nature of the operation, and more dexterous in the performance of it. We have known a surgeon so absorbed in the operation of amputating the leg of a patient who cried out violently, as never to have heard his cries; expressing surprise when the patient, after the operation; apologised for the noise that he had made, and declaring that he had not heard it. On the other hand, we have known a surgeon almost unfitted for performing operations on others in consequence of having had a painful operation performed on himself.

But what seems decisive on this point is, that we sympathise with persons of whom we know nothing but the history of their sufferings. Now that seems to prove that it is not with the person but with the sufferings that we sympathise. The person may be named A., B., C., as in a mathematical problem, and just as such problems and demonstrations of them are not confined to the diagram before us, but are intended to extend to all figures coming under the same description, so our sympathising with persons who are known to us only as A., B., C., circumstanced in the manner related of them, and suffering as related of them, proves that it is not with these particular individuals that we sympathise, but with the description of the suffering. Let A. be a young lady, beautiful and accomplished, the daughter of a widowed mother of highly respectable family, betrothed to B., a gentleman of worth, in every way a suitable match for A. They are soon about to be married, when A., in the course of her necessary preparations, goes to a mercer's shop to purchase some article of dress. After making her purchase she is followed by S. the shopman, and charged with stealing a valuable lace veil. Her reticule is examined, and the veil found in it. M., the mercer, having experienced several losses of a similar kind, is determined to make her an example, and hands her over to the police; the fearful necessary preliminaries are gone through; she is committed for trial; yet strong in conscious innocence, and in the undiminished esteem of B., who does not believe the charge. The day of trial arrives. M., the mercer, and S., the shopman, swear directly against her; there is no exculpatory evidence; and C., her counsel, is perplexed and despairing of extricating his client from her most critical and agonising situation, when G., a gentleman in the gallery, hands a note to C., requesting to be examined as a witness. C. hesitates to hazard the calling forward of a person of whom he knew nothing; but, in his extremity, he does call forward G., who, on his examination, declares that he was present in the shop when A. was making her purchase, and that he saw S. put the lace veil into A.'s reticule, which did not strike him at the time as being remarkable, as he thought it was one of the articles she had purchased. After cross-examination, the jury are satisfied of A.'s innocence, and she is discharged. S. is afterwards tried for the perjury, and transported; and it transpires that the robberies which M., his master, had complained of, were effected by S. himself. But the shock has been too much for the nervous system of A. B. afterwards takes C. to visit her; and C. finds her sitting by her mother, beautiful and interesting, but sunk into a state of hopeless idiocy. Now who is there that does not, on reading such a narrative, deeply sympathise with A., her widowed mother, and her lover, and even with the mercer, who, if he was a man of character, must have been distressed beyond measure at the mental anguish which he was prevailed on by deception to inflict? Yet what do we know of the persons who are the subjects of this sad history, but as A., B., C., M., S., &c.

It is, indeed, the more palpable that it is with the sufferings, and not with the sufferer, that we sympathise, when we remember that we sympathise with persons that we know to be fictitious. We may be greatly moved by the sufferings of persons related in tales, (such, for example, as the Arabian Nights,) so extravagant as to render it impossible to believe them. Who does not sympathise in the sorrows of poor Sinbad the Sailor, and yet who ever believed them? It is not, therefore, with a person that we sympathise, but with sufferings of which we can form some conception from our own experience. If the description of suffering do not recal to us some suffering that we have experienced, it fails of exciting our sympathy. We have no sympathy, for example, with the Spirit of Loda in Ossian, when he was cut in two by the sword of Fingal, except, perhaps, that the shriek which he uttered as "rolled into himself he rose upon the wind," suggests some obscure recollection of anguish of some kind. Neither do we sympathise with the effect of cannon shot on the angels in Paradise Lost, simply because it recals nothing that we have ever experienced, and is, therefore, unintelligible to us. Nothing, therefore, we conceive, can be more evident than that sympathy for suffering is merely the ordinary operation of the laws of suggestion.

The same observations are equally applicable to the witnessing of causes of happiness operating on others. In these cases, the feeling is too frequently impaired or neutralised by envy, by regret that the happiness which we witness in others is not our own; so that the train of pleasant suggestions or emotions which the witnessing of the joy of others would naturally recal, is often superseded by a train of thought of an opposite description. But when envy is excluded, as it naturally is when we cordially love the person whose joy we witness, then do we rejoice as unfeignedly with those who rejoice as we weep with those who weep.

There is one difference to be noticed between sympathising with pain or distress, and sympathising with pleasure — namely, that sympathising with pain is naturally, or even necessarily accompanied with desire to relieve it; whereas sympathising with pleasure is never accompanied with any desire to diminish or extinguish it. The pain of another person becomes, by suggestion, our own pain, and, as we naturally desire to be relieved from our own pain, we, for the same reason, desire to be relieved from the pain of others. By relieving others we remove an object that is calling up to us painful emotions. There is no preventing this desire but by inuring ourselves to scenes of human misery, without seeking to relieve it, or, in other words, by hardening the heart.

This view of sympathy also accounts for that infectious sympathy which is often witnessed in crowded assemblies. Some cause of alarm arises among an assembled multitude. Every countenance instantly puts on the signals of fear. We cannot turn to any side but we see what recals some object of terror. Screams follow, violent efforts are made by some to escape, all adding to the suggestions of something terrible, till the people, seized with panic, become frantic, and lose all command of themselves. We remember an incident of this kind in a crowded place of worship. Some crash occurred that gave rise to the apprehension that the house, or at least the gallery, was falling. The congregation were instantly on their feet. Some began to make their way out. The noise was becoming greater every moment. The clergyman, who saw the cause of the crash, and knew there was no danger, endeavoured to calm the people, but his voice was drowned in the confusion and noise. With admirable presence of mind he addressed himself to those who were near him, gave out a psalm to be sung, and got them to join with him in singing it. This sound, which spoke of safety and tranquillity, was powerful enough to reach the extremities of the house. The people who were hurrying out looked back and saw a portion of the congregation quietly sitting engaged in worship; the soothing, and, at the same time, solemnising effect gained the ascendancy, and the people gradually returned to their seats, when the clergyman explained to them the cause of the noise that had so much alarmed them.

Some persons are moved to tears by the pathetic address of an eloquent man, who, if they had heard him alone, would have retained the most perfect composure, but seeing the signs of grief in others, and having grief vividly brought up before them, are shaken; the natural expressions of grief—the tears, the distortions of countenance, the sobs, the wiping of eyes, becomes more general, and advances in geometric ratio. Every new person caught in the vortex of feeling draws in others, till the whole audience becomes painfully affected; and it is sometimes said of such scenes, not a dry eye was to be seen in the whole assembly. When, however, the sympathetic cause has passed away, the greater part wonder what made them weep and sob, and perhaps are disposed to laugh when they think of it.

So, at a circus or pantomime, a man appears with his face grotesquely painted, arrayed in some fantastical dress, grinning and perhaps assuming the gestures and postures of an idiot—a sort of exhibition which, if seen in a private room, would, unless in an assemblage of children, excite no emotion but contempt and disgust. But, in a crowded assembly, there are always some who are ready to laugh at such fooleries. The laughing countenances of some suggest the emotion of laughter to others, who begin to laugh also; sounds of laughter are heard, the infection spreads, till a whole audience, among whom, it may be, are many persons of grave and sober temperament, is convulsed with laughter at they scarce know what, and certainly at what, on the recollection of it in private, cannot move them to a smile.

CHAPTER VII.

INTELLECTUAL OPERATIONS AS CONNECTED WITH RECOGNITION.

We have already observed that the mind having discovered that it is in society with other minds similar to itself, but of various characters, some fitted to promote its happiness, others to render it unhappy, its discriminating powers are necessarily engaged in forming estimates of the characters of all persons with whom it has intercourse. It soon becomes one of the great businesses of human life to form judgments of character; and every man within the range of our acquaintanceship holds a certain station in our estimation in regard to the two great elements of character—namely, *power* to give pleasure or to inflict pain; to do good or evil; and *disposition* towards men generally, and toward ourselves particularly.

Classification.

The characters of men are so infinitely varied, that it is impossible to arrange them definitely under classes. The only approach that can be made to such classification is by reference to the more prominent attributes of men in regard to *power* and in regard to *disposition*. In regard to power, we call them rich poor, influential, insignificant, able weak, learned ignorant, acute stupid, witty, agreeable, tasteful, determined, inflexible, cowardly, vacillating, cunning, simple ; or, in regard to disposition, loving malicious, generous selfish, upright dishonest, benevolent malignant, meek irascible ; or, more general still, good or bad. But these various attributes of character are so combined in such different degrees of intensity in different individuals, that all classification must necessarily be vague and indeterminate.

The nature of the intercourse of men with one another admits of a rather more definite classification—as family intercourse, commercial intercourse, political intercourse, religious intercourse; the intercourse of ruling and obeying, teaching and learning, bestowing and receiving.

Induction.

Induction, as applied to human intercourse, is sometimes called moral induction, as distinguished from the more certain inductions founded on material phenomena. In moral inductions, namely, that certain sequences will follow certain antecedents, because on former occasions similar antecedents have been followed by such consequents, the difficulty is to ascertain that the antecedents are the same. But till that be ascertained, no certain induction can be made. Antecedents may be the same in some respects, and yet be so different in others, that very different consequences would result from them. Certain measures have produced certain effects at one period, or in one nation, and it is argued that similar effects may be expected from the same measures now, and in other nations. But the antecedents may be altogether different now. The measures proposed are not the whole of the antecedents. The changes that may have taken place in society, the advance of education and information, the previous history of the nation, may be altogether different from the previous history of that in which the measures in question produced their effects. The laws of Lycurgus, for example, could not be established in any modern state of Europe or Asia. The military tenures of land of the middle ages would be impracticable in the present day. A public provision for the poor which has succeeded in one country may be ruinous in another. From thus confounding partially similar antecedents with the same antecedents, laws have frequently been enacted which have produced the very opposite effects from those that were intended.

Reasoning.

Moral reasonings are liable to the same uncertainties in a greater degree than simple moral inductions; namely, those which arise from the difficulty of ascertaining how far former antecedents and consequents, on which the reasoning is founded, are identical with those which are employed as media, and how far the antecedents and consequents in the media are identical with those in the conclusion. When the characters and motives of men enter as elements into any process of reasoning, they necessarily, from the impossibility of ascertaining and defining them exactly, and reducing them to accurately defined classes, communicate uncertainty to a greater or less extent to all such reasonings. There are some motives by which men generally are influenced, which may, in ordinary circumstances, be reckoned upon with tolerable certainty. The sciences of political economy and of legislation proceed upon the influence of such motives, and frequently the sequences which they predict are found to be realised according to the prediction. But frequently, in consequence of the erroneous estimates which legislators form of human character, and of the motives likely to influence men, the laws which they enact produce effects very different from those which they intended and expected; and sometimes not different from them merely, but directly the reverse of them. This observation has been verified very frequently in British laws referring to Ireland. It has been verified in innumerable instances in laws enacted for the controlling or regulating of religious principle. Legislators, judging of other minds by their own, have generally taken it for granted, that all men would sacrifice any principle for their temporal interest, especially when not only property, but liberty and life were threatened. They seldom have been aware, that in dealing with religious principle, they were dealing with an element which, when earnestly and honestly held, is infinitely more powerful than the highest and most urgent temporal interests; and have attempted to get rid of some religious belief or practice by confiscations, imprisonments, fire, and sword; often, alas! by the most inhuman tortures. They were not aware that they were only impressing the people with a deeper sense of the importance of their religious belief, and more thoroughly convincing them that they could not abandon it without exposing themselves to the horrors of eternal damnation. And they have usually found, to their dismay, that the more they persecuted, the more firm hold did the proscribed religious tenets take of the minds of the people; and that, when they succeeded, by an extensive unscrupulous system of murder and torture, to quash them for a time, it was only like a smouldering fire, ready to break out with greater fury on the first favourable opportunity.

Imagination.

The name imagination is given to various operations of the mind, which seem to consist of very different elements; it is, therefore, impossible to give any accurate definition or description of it, further than giving the meaning and various applications of the English word.

The idea originally conveyed by the word imagination, as its etymology indicates, was an image of some external object in the mind. If that was an object that really existed, and was perceived by the senses, the representing the image of it to the mind does not differ from remembrance, as regulated by the laws of suggestion. The vividness of the remembrance depends on the degree of attention which it attracted when it was perceived; and that degree of attention, we have seen, would be regulated by the intensity of the feeling of pain or pleasure, or of emotion, such as wonder, desire, or fear, that accompanied the perception of it.

Of this kind are those vivid images that rise in the mind, caused by a morbid state of the brain, as in fevers and delirium tremens. Of the same kind, probably, were those visions, called in the Highlands of Scotland "Second-sight," and in Ireland "Ban Shee." They seem to have had their origin in an over-excited nervous system, caused by the unsettled state of the country; the incessant feuds between neighbouring clans or families, the constant dangers to which the people were exposed; the frequency of violent deaths, or deaths caused by traversing a mountainous country under covert of night—deaths by snow, by drowning in swollen torrents, by falls from precipices, by wolves or other wild animals. Under such circumstances, the minds of sensitive and timid persons were kept in constant dread and anxiety for their own safety, and for the safety of near relations; and when that habitual anxiety was increased by any actual danger, it was no more wonderful that visions connected with their anxieties and terrors, should occur, than it is that such visions are seen in fevers affecting the brain.

To the same cause are to be traced all those superstitious terrors, or, as they are often called, imaginary terrors, that have been found to affect the minds, and even the health and the lives, of ignorant people, such as the dread of witches, wizards, priests of various tribes of the most degraded of the heathen. The dread of witches in Europe seems to have taken its rise from poisoning having been practised by old women in the corrupt times of the Roman empire. The feats of the poisoners are very much the same as those ascribed by popular tradition to witches. The Venefica and Canidia of Horace would form a good corresponding group to the witches in Shakspeare's Macbeth. The priests and sorcerers of various tribes of savages probably established the terror of their mysterious power by poison, till their threats, their malignant look, or evil eye, as it was called in Scotland, called up such a host of terrible objects to their minds—lingering, painful, horrible deaths, that the terror excited often effected the work of death without the actual administration of poison.

If the object called up to the mind by suggestion be not a real object, perhaps an object which could have no real existence, as when the qualities of one object, or class of objects, are ascribed to other objects, or, as when scenes of one locality are transferred to another, we have already expressed our persuasion that this operation of what is called imagination is chiefly, if not wholly, dependent on the use of language. Many of the objects described by poets and others could raise up no vivid image before the mind; because the qualities or attributes ascribed to the objects could not co-exist in the same object. We conceive that these irreconcilable qualities, never seen together in the same natural object, are brought together in the mind solely by the use of language. And very frequently the vague, dim, uncertain, wavering image that is thus made to float before the mind, constitutes its chief attraction; more vividness would impair its effect.

Another operation of the mind, usually called imagination, is the ascribing of mental qualities and operations to inanimate objects, or to inferior animals. Much of the effect of poetry is produced in this way. Mountains frown, valleys smile, waters repose, or rage, or dance, the hills rejoice, a desolate land mourns,—and thus all nature becomes instinct with life and feeling. From the same source we have some of the most attractive descriptions of inferior animals: Wilson's Ornithology derives its chief charm from this exercise of imagination. From the same source we have the commonwealths of bees and of ants; their workers, their soldiers, their drones, their officers and engineers, their queen, with her guards, her royal residence, and her nurseries for the young. We have also, from the same source, the tender care of insects for their prospective young; their providence in laying their eggs only where their young when hatched shall find food; in short, imagination representing their movements as being instigated by the motives and feelings which impel men to similar acts.

The converse of this, namely, the ascribing to mind qualities of inanimate matter, is another operation called imagination; as when we speak or hear of men of iron, hearts of stone, or of steel, the sinking and rising of the spirits, and innumerable others.

We have already seen that this exercise of imagination is not different from the discovery of points of similarity or difference among our sensations, or the objects of our perceptions. It may be supposed that these resemblances, being not real, but the creation of the mind, a power of the mind distinct from memory with its laws of suggestion, is necessary to account for them. But *are* they the mere creation of the mind? or is there any real resemblance which the mind does not create, but only perceives? It would, we apprehend, be totally impossible to draw the line of distinction between those resemblances and differences which are supposed to be discerned without imagination, and those which should be ascribed to imagination. Does, for example, the similarity between a raging tempest and a raging man, belong to perception, or to imagination? There is a palpable resemblance between the noise and violence of the one and of the other, which gives rise to the same epithet (*raging*) being applied to both. To which power should the resemblance between a lake asleep and a man asleep be assigned? There is a resemblance applicable by discrimination exercised on perceptions, between the stillness of the one and of the other, that doubtless suggested the application of the word sleep to both. So in most, or all, of the comparisons thus made between mind and matter; they are founded on real traits of resemblance between them in some respect, — their nature, their origin, or their sequences. One very general similarity will be found between qualities of matter and of mind thus brought into comparison; namely, their both affording pleasure, or causing pain, of some kind. Thus the weather is said to threaten, because it indicates the approach of thunder, or rain, or tempest, which will give pain; or, it is said to promise, because it indicates the approach of sunshine, which will afford pleasure; or, because it is favourable for the harvest, which will afford still greater, although more distant, pleasure.

Still another operation of mind, which falls under the word imagination, consists in what is sometimes called inventing or creating characters or incidents. We are inclined to think that there is much less of invention than of memory and discrimination and selection in this phase of imagination. We do not mean to say that every character or incident thus depicted had a real existence, just as it is described by the writer of fiction; but that from among many remembered traits of character, some are selected which suit the author's purpose, and are combined by him in one person, distinguished by certain acts and a certain name; and the skill of drawing such characters consists chiefly in making a judicious selection of traits, such as will not appear inconsistent with one another, and such as bear upon the author's design. A similar explanation may be given of the invention of incidents. We daily hear or read of so many incidents, that any man who directs his mind to the describing of interesting incidents has ample stores to cull from, laid up in his memory, which, without any other power than that of suggestion and discrimination, may be made available for any purpose. A simple matter of fact is announced in the newspapers of the day, or is witnessed by us,—say that a boy fell into a river, and was in imminent danger of being drowned, when a person passing by sprang into the river and saved him. Now it surely requires no original power of mind beyond suggestion, directed by the desire of obtaining an incident such as may be sought, to convert the boy into a beautiful and interesting young female,—the man who sprang into the water into her lover. Nor is there any power of mind beyond suggestion required to imagine many interesting things that might be said and done by both parties, and by the relations of each, in accordance with their several characters and the design of the author.

The highest exercise of what is usually called imagination, and the most difficult to account for, is the dramatic, in which an author not only draws a character, selecting such traits as favour his design, but so enters into the feelings and motives and manners of the imaginary person of his own construction, as to make him act and speak in accordance with the character with which he has invested him. We are inclined to think that there is something approaching to a refined mimicry in this talent. There are some persons who can with surprising accuracy mimic the tones of the voice, the gait, and manner of others. There are some who can add to this a mimicry of the sentiments and expressions and actions of persons with whom they associate. They can suppose them to be placed in certain circumstances —for example, under some provocation to anger, or some excitement to fear, and successfully mimic their language and actions in the supposed circumstances. There are some who can achieve a still higher and more refined mimicry by imitating the style of thinking and writing of other persons. A remarkable example of that talent the public had some years ago in the well-known work entitled "The Rejected Addresses," in which the style of thought and expression of some of the most popular authors of the day, and these no ordinary men, is imitated with surprising success. It is but one step further for an author to form out of the stores of the elements of character and modes of thought and expression laid up in his memory, the conception of a character having certain attributes, and placed in certain circumstances, and so to realise the conception as to imitate, if we may use the expression, the style of thought and language of the kind of person of whom he has formed a vivid image in his own mind.

If this be a true account of the talent which we are considering, or if it have any approximation to truth, then the operations of the mind displayed in it consist in a very exact observance of character, and of the resemblances and differences between different characters, the mode of thinking, speaking, and acting exhibited by different individuals in similar or in different circumstances, and in the judicious selection of such traits of character as shall not merely not be inconsistent with another, but as are suitable to the imaginary character to be portrayed. It is, in short, an exact discrimination of resemblances applied, not to material objects, but to different traits of character, the suggestion and selection of such traits of character with which the memory is stored, as suit the imaginary person to be introduced into the scenes of life, and the rejection of all others. And the mental qualities upon which the dramatic talent depends are the powers of minute and exact observation of character, of forming realising conceptions of the mental powers, feelings, and motives of different individuals, and a delicate perception of what language and style of thinking is exhibited by different individuals in different circumstances. We are inclined to think that there is much more of mimicry, and less of creation, in the dramatic talent, than is commonly supposed. We are inclined to think that the best drawn characters are portraits from nature, (as the best historical paintings are,) with a little modification. A really original character would fail to attract sympathy. To render a fictitious character intelligible and interesting, it must have thoughts, and feelings, and motives, and actions ascribed to it which can be appreciated by men generally, and therefore must be taken from the ordinary walks of human life.

CHAPTER VIII.

ON TASTE, OR THE APPRECIATION OF BEAUTY AND SUBLIMITY.

We have assigned to what has been called a sense of beauty, or taste, a chapter to itself in this division of our work, as being neither a mere emotion, nor a mere discernment, but a discernment of qualities or relations among external objects, which carries along with it a certain pleasing emotion, for which we have no better name than *taste.* The qualities or relations among objects which excite this peculiar feeling, we express by such words as beautiful, elegant, tasteful, graceful, sublime, and others. We have, therefore, not called it an *emotion*, nor a *discernment* of beauty or sublimity, but an *appreciation* of beauty and sublimity. The phrase does not entirely satisfy us, but we cannot think of a better one. We have placed it under the division of mental phenomena, dependent on recognitions, because, in artificially exciting the appreciation or feeling of beauty or sublimity in the minds of others, the most frequent, and perhaps the most efficient, mode of procedure, is to suggest to them the remembrance of pleasant sensations, or of objects yielding pleasant sensations, or objects exciting awe and terror. We deem this, therefore, the most fit place in which to introduce our views on the subject.

Some recent writers, of great ability, have contended that the feeling of beauty or sublimity *always* arises from the suggestion of pleasing or terrific objects. We cannot, however, accede to the doctrine that all beauty or sublimity is referable ultimately to mind,—that the beauty, for example, of an evening sky is derived solely from its suggesting to us ideas of repose and peacefulness; for there are many objects which still more vividly call up thoughts of repose and peacefulness which yet excite no idea or feeling of beauty; as, for example, a bed or bed-room, a person or an inferior animal asleep. We apprehend that, so far from the association or suggestion of pleasant objects being the sole foundation of our appreciation of beauty or sublimity, it has nothing to do with the subject. We do not mean, of course, to say, that beautiful objects may not be called up to the mind by suggestion, or that the power of calling up scenes of pleasure and comfort in other minds may not, in the exercise of it, excite the feeling of beauty.

But we apprehend that no suggestion could *create* the feeling or appreciation of beauty. Objects that suggest thoughts of comfort are not on that account beautiful. A parlour may remind us of pleasant scenes, happy faces, cheerful conversations,—all the delights of domestic society; yet the parlour may never be regarded by us as itself a beautiful object. The kitchen fire, to which we may have betaken ourselves when we were cold and drenched with wet, will as often as we see it, or think of it, suggest to us ideas of great comfort; but it may never occur to us that the kitchen or the fire were in themselves beautiful objects. Unless there be notions or feelings of beauty in the mind, we apprehend that no suggestion of agreeable objects will create them. A foundation must be laid in the qualities or relations of external objects, and also in the mind itself, for the appreciation of beauty or sublimity, else there could be no such appreciation.

There are several distinctions that must be attended to before we can attain to clear notions on this difficult subject. There is, first, the difference between *beauty* and *sublimity*, which is so great as to require them to be treated separately, although the appreciation of both is called by the same name—taste. Then, there are those qualities in *material objects* that convey ideas of *beauty*. Still further, there are those qualities of *mind* that convey the same or analogical ideas or conceptions of beauty; then there are the qualities in *works of art* which convey conceptions and feelings of beauty. And, lastly, there are the same distinctions with regard to *sublimity*,—namely, those qualities in material objects, those qualities in mind, and those qualities in works of art, which awaken feelings of the sublime.

I.—*Material objects.*

It has been strongly contended, that there are no qualities or relations in external nature which are in themselves beautiful or sublime, but that all external objects which excite such feelings do so, from their suggesting mental qualities or states, and that any other pleasures that they excite are merely pleasant sensations. A very large proportion, indeed, of those external objects which excite feelings of beauty or sublimity, do so from their suggesting mental states or qualities. A very large proportion of what we regard as beautiful or sublime in a landscape, a rising or setting sun, a variegated country of hill and dale, woodland and open pasturage, a clear and cloudless sky, or a sky betokening thunder and tempest, derives much of its beauty or sublimity from its suggesting such mental states or qualities as peace, repose, comfort, happiness, power, anger, complacency; but independently of such resemblances, we apprehend that there are qualities in material objects themselves which excite the feelings of beauty and sublimity.

Sensations being pleasant or painful are not on that account beautiful or sublime, either when experienced or when remembered. We do not apply the word beauty or sublimity to sensations of smell, or taste, or touch; but confine such expressions to sensations of sight and hearing. Nor are mere sensations of seeing or hearing, however pleasant, beautiful or sublime. These feelings are excited by qualities in external objects. A mere uniform colour occupying the whole range of vision is not beautiful or sublime, nor does a sensation of uniform sound exciting a pleasant titillation, like the sounding of perfect thirds or fifths together, although very pleasant, excite such a feeling of beauty as is appreciated by taste. We may call it beautiful, as we may call the smell of a rose beautiful, but it is a mere pleasant sensation, not an appreciation of beauty.

But if we can find qualities or relations in material objects which convey conceptions or feelings of beauty or sublimity, not by mere sensation, on the one hand, nor by suggesting mental qualities or states on the other, we shall have found qualities or relations of bodies which excite feelings of beauty or sublimity properly so called.

Of beauty in material objects.

1. The tones of the musical scale, sung or played in any order, are pleasing, but especially the tones of the triad, the 1st, 3rd, and 5th of the scale, or the 5th, 7th, and 2nd, or 4th, 6th, and 8th, or the 6th, 8th, and 3rd, and several other chords which may be found in the scale. These tones sounded together, or in succession, in any order, are pleasant. A pleasing musical sound, without relation to any other sounds, is a mere pleasant sensation; but in the tones of a scale, and, still more, in the tones of the common chord or triad, there is something more of pleasure than the mere titillation of a pleasant sensation. It is true that these tones of the scale may be so employed as to suggest particular states of mind, as joy, sadness, &c.; but that is another pleasure altogether. And mere tones of the scale or the triad, without selection, but played up and down on the instrument in any order, are not fitted to excite the remembrance of any beautiful object. We conceive, therefore, that there are three distinct sources of pleasure in musical sounds. There is, first, a mere pleasant sensation; there is, secondly, the pleasure derived from hearing the same tones in their relation to one another, which is properly beauty; and there is, lastly, the pleasure of the suggesting of pleasing ideas or states of mind.

Some think that variety would account for the pleasure derived from the relation of the sounds of the scale to one another. But variety of tone will not account for the phenomenon; because there would be greater variety in the introduction of tones not belonging to the scale, or tones intended to be of the scale, but out of tune. No pleasantness of sound would compensate for the introduction of tones not belonging to the scale.

Here, then, we conceive that we have found one of the original sources of the conception or appreciation of beauty.

2. Nearly the same observations are applicable to the seven colours of the spectrum. These are beautiful seen together, or in immediate succession, and especially the three primary colours, red, blue, and yellow. Indeed, the many recondite analogies that exist between sound and colour seem to indicate that there is an occult power of the mind, in which they stand as identical. The pleasure derived from a clear brilliant colour is strikingly analogous to the pleasure derived from a clear brilliant musical tone. The mingling of any two of the primary colours produces an effect similar to the mingling of any two of the tones of a musical triad; and the exhibition, in succession, of the colours of the spectrum is analogous to the succession of the tones of the musical scale. Here, then, we have another original source of the appreciation of beauty.

3. Order and symmetry in visible objects communicate, we conceive, a pleasure different from sensation on the one hand, and from the suggestion of pleasant sensations, or objects yielding pleasant sensations, on the other, and therefore constitute a third original source of the appreciation of beauty. Of this source of the conception and feeling of beauty we have at once a proof and illustration in the kaleidoscope. Take a little bit of crockery-ware, or a rusty nail, or a bit of paper,—things which are as destitute of beauty in themselves as any that we can imagine,—put them into a kaleidoscope, and the mere repetition of them, in a symmetrical order by reflection, instantly conveys the conception and feeling of beauty. Now, this is not mere sensation; nor is it suggestion, for we know of no mental state, nor any pleasant object, which the spectrum of the kaleidoscope recals. It is perhaps more like a flower than any other object in nature; but certainly its effect in awakening the

conception and feeling of beauty does not depend on reminding us of a flower. Few, perhaps, we apprehend, would be reminded of a flower, or of any other natural object, by some of the most beautiful spectra of the kaleidoscope. A native of Labrador or Greenland, who might never have seen a flower, would, we doubt not, be affected by the images of that instrument.

It seems much more probable that the beauty of the forms of flowers depends on the symmetrical order of their petals, and other parts, than that the kaleidoscope should derive its powers of communicating the conception and feeling of beauty from its calling up the remembrances of flowers, or of any other natural object. Perhaps no one ever had the pleasure which he has received by looking through a kaleidoscope enhanced by associating it with the soft texture or fragrance of a rose or a carnation, or with scenes in which these flowers are found.

The Deity seems to have fitted the soul for deriving pleasure from order and symmetry, and to have availed himself of that capability of the soul to communicate pleasure to it by the infinitely varied symmetrical forms of external objects. Besides flowers, to which may be added crystals, all the higher orders of animals are formed of two parts precisely corresponding to one another, as the reflections in the kaleidoscope. A central perpendicular line drawn from the crown of the head to the feet divides the human countenance and figure into two exactly corresponding parts, answering to one another with the most perfect exactness. Such also is the construction of all quadrupeds, birds, fishes, insects. On a similar rule of construction is formed every leaf of the foliage of trees and every blade of grass; and doubtless it is from this symmetry of form that these objects derive their beauty. Symmetry and regularity thus seem to furnish us with another original source of the conception and feeling of beauty.

4. Variety is another source of beauty; not, however, simple variety, but variety combined with order and symmetry. Variety is, therefore, rather an enhancement of the beauty of symmetry than an independent source of beauty. Of this principle also the Deity has availed himself in beautifying the world. The variety of organised forms in the mineral, vegetable, and animal kingdoms is inconceivably great. Every such object possesses variety combined with symmetry. When the countenances and forms of men and other animals are traced latitudinally, they consist of two parts, as we have said, precisely corresponding to one another. When traced longitudinally, from the head to the feet, the outline is continually varying. Here, then, if not an independent original source of beauty, we have an enhancement of the beauty of form.

Sublimity in material objects.

The feeling of sublimity is not, as some have supposed, the feeling of beauty exaggerated. A minute flower may be exquisitely beautiful, and perhaps will appear the more beautiful the more minute it is; but it can never be sublime. The tones of a little musical box may be exquisitely beautiful, from their being a varied succession of the tones of the scale, frequently combined into chords, and accompanied with the order of rhythm or accent, and with a certain symmetry of composition, one part answering to another, as in the spectrum of the kaleidoscope; but by no arrangement could such sounds ever be made sublime. The sources of beauty which we have enumerated are in truth rather unfavourable to sublimity than otherwise. Harmony of colour or of sound, symmetry, order with variety, not only could never of themselves excite the feeling of sublimity, but would detract from the sublimity of objects that without them would be sublime. A mountain cut into the regular form of a cube or a pyramid, would be less sublime than the same mountain left in its original irregular form, with its yawning chasms, its jutting crags, and stupendous precipices. The various sounds of a powerful ring of bells, heard in succession, are more beautiful, but less sublime, than the clash of all the bells together; although that makes a hideous discord, utterly devoid of beauty.

There are two qualities in external objects that seem to be the chief, if not the only, sources of the conception and feeling of sublimity,—namely, vastness, and power or energy.

Anything vast, that puts our faculties to the stretch to comprehend it, or still more if it pass our comprehension, is felt as sublime. The vault of heaven, the boundless ocean, the immense distances of the heavenly bodies, as discovered by astronomy, are in the highest degree sublime. Abstract notions such as infinite space or eternity, are sublime, from their including an incomprehensible vastness.

The other source of sublimity is power, force, or energy. A cataract, a tempest, a loud peal of thunder, a flash of lightning, a volcano, whether at rest or in active eruption, are sublime, from the conception of great power which they communicate. Great force, in comparison with human strength, though immeasurably inferior to these natural objects, may excite the notion and feeling of sublimity, as the fire of artillery, the spring and roar of a lion, the coil of the boa constrictor, the terrible energy of the shark, are sublime objects. From the same cause, venomous animals,—the scorpion, the cobra capella, the rattlesnake, and other deadly serpents, may, in many situations, be felt as sublime.

Both of these sources of sublimity, in external objects, are increased by obscurity. A lofty mountain, the expanse of ocean, are more sublime in the twilight, or covered with a certain amount of mist, than in bright, clear sunshine. The sublimity of a tempest, and of thunder and lightning, is greater in the night than during the day. So the rattle of a rattlesnake, although we may be in perfect safety from its assault, becomes sublime when heard in the darkness of night.

In short, clearness, regularity, symmetry, polish, in external objects, and variety connected with these qualities, communicate the pleasure of beauty; whereas, vastness, power, obscurity, awaken the conception and feeling of sublimity.

We are much inclined to think, with Burke, that a certain degree of fear is a necessary ingredient in the feeling of sublimity. Not a sense of personal danger, for subjective sublimity has high enjoyment connected with it, and the dread of danger would be inconsistent with that enjoyment; but that degree of awe which comes over the spirit when we contemplate any object of vast extent or magnitude, or any great exhibition of power or energy.

II.—*Qualities of mind that awaken the conception and feeling of beauty and sublimity.*

MENTAL BEAUTY.—Those qualities of mind that excite the feeling of beauty are more diversified than those in matter. They are, however, analogous to the qualities in matter which awaken a feeling of beauty: order, regularity, calmness amidst incentives to contention, gentleness, well-regulated affections, generosity, a symmetrical mind, in which the various faculties are in well-balanced exercise. In regard to intellect, that mind is beautiful that is enlightened with important knowledge,—that, with apparent ease and little labour, can discern differences and resemblances in material or mental objects, can classify them judiciously, so as to have its knowledge always at command. To be beautiful, there must also be a just proportion between the intellect and the emotions. A mind may be deformed by having a great excess of feeling over its intellectual power, or great intellectual power with little sensibility.

MENTAL SUBLIMITY.—The sublime in minds viewed as objects, as in matter, consists in qualities that convey the conception and feeling of vastness or energy. In intellect, a wide grasp of understanding, such as that of Sir Isaac Newton, is a sublime object. The mind of a great monarch, swaying an extensive empire with wisdom and calm dignity, is another sublime object. Minds of great energy—Achilles, as painted by Homer, Alexander of Macedon, Julius Cæsar, Bonaparte, and others—are sublime. Such barbarians as Genghis Khan, Timor Beg, Alaric, and others, are too destitute of intellect and too ferocious to be sublime. Their invasions were too like mere irruptions of hungry wolves, with power from their numbers to destroy, but without any exhibition of mental energy, to be sublime. Passions and affections may become sublime if they beget acts of great self-denial, the braving of imminent danger, the surmounting of great obstacles, the enduring of great sufferings with equanimity. Even vices may acquire a sort of sublimity by their fearful intensity. A kind of awe is upon the spirit, which, if not sublimity, is nearly akin to it in contemplating the artful, dark, unscrupulous' and energetic character of Cæsar Borgia. Lord Byron seemed most to delight in attempting to excite this variety of the sublime. In short, it is in mind as it is in matter, calmness, clearness, order, symmetry, polish, benevolence, beneficence, contribute to beauty; whereas great expanse or force of intellect, and more especially great energy of character, heightened also by darkness and mystery, contribute to sublimity.

We must, however, take care not to confound those objective qualities of mind or matter which excite conceptions and feelings of beauty or sublimity, with the artificial awakening of the subjective sublime or beautiful.

III.—*The artificial excitement of the emotions of beauty and sublimity.*

All works of art aim at the excitement of the one or the other of these emotions. The painter, the statuary, the architect, the musical composer, the poet, so far as their works are to be regarded as works of art, seek to excite feelings of beauty or of sublimity. Other aims may mingle with these, as communicating information, pathos, utility; but it is the exciting of conceptions of beauty, or sublimity, that entitles their works to rank among specimens of the fine arts.

The artificial excitement of beauty.

Here the artist has a much wider range of objects to make use of, than those which are in themselves beautiful. All objects, even the homeliest, which suggest thoughts of comfort and happiness, become beautiful when vividly recalled by such arts as painting, music, and poetry. The sleeping peasant, the parlour, the kitchen fire, may have no beauty in themselves, yet may, when skilfully introduced by the artist seeking to fill the mind with pleasant thoughts, become exceedingly beautiful. In addition, therefore, to objects beautiful in themselves, material or mental, the artist may employ all objects fitted to recal pleasant sensations or emotions of any kind.

2. Artists must avail themselves of those qualities which in themselves are sources of beauty, according to the nature of their several arts.

Musicians must avail themselves of clear, pleasing tones, and of the notes of the diatonic scale, and the combined tones of the triad. They must convey notions of order and symmetry by the regular return of their accents and cadences, by their corresponding passages, and by the orderly and symmetrical construction of their whole work, whether longer or shorter. They must avail themselves of variety, by the different lengths of their tones; if the work be long, by different rhythms introduced into it, by passing from scale to scale in modulation, and by different expressions, as the pathetic, or the joyful, or the excited; even by an admixture of tamer and more discordant passages, to give relief and effect to passages of feeling and brilliancy.

Painters must avail themselves of light and shade, and also of harmony of colouring; that is, of a due mixture of red, blue and yellow, either pure or mixed with one another. The picture must not be too blue, or too red, or too yellow. The light and shade, and also the colours, must be distributed in some order, and symmetrically. One side of the picture must not be all light, and the other all dark; one side must not be of a reddish or brownish tinge, and the other side blue or purple. But the lights and shades, and also the colours, must be arranged somewhat in kaleidoscope fashion; a central light and central colour, with secondary lights and similar colours appearing in different parts of the picture around the centre. Variety also must be studied in the objects introduced, in forms, in colours, in countenances, in attitudes, in expressions. Yet that variety must be in subordination to order and symmetry.

The statuary having nothing to do with sound or colour, must attend to those sources of beauty which remain. His chief aim must be the expression of mental beauty, as ease, dignity, calmness, benevolence; but he must study symmetry in the attitudes of his figures, and in grouping them. And here we find the same fundamental principle of a central principal object, and inferior objects grouped in subordination to it. Variety also must be attended to. In a single figure, the limbs on the same side must not be both extended forward, and on the other side drawn back; but there must be variety in the positions of the head and the body, and the limbs. In groups of figures, they must not be all looking one way, or in the same attitude, or of the same height, like the Egyptian pictures and engravings on stone; but variety must be exhibited in the attitudes, positions, heights, &c., in combination with order and symmetry.

The architect's art depends almost entirely on order, symmetry, and proportion of parts. He must indeed adapt the style of his building to the purposes of it, as we shall have occasion to notice more distinctly immediately; but whatever style he may adopt, so far as the producing of the pleasure of beauty is concerned, he has chiefly to do with order and symmetry. And the nature of the symmetry, especially of Grecian and Roman architecture, is of the same nature with that of the human body,—a central perpendicular line, on each side of which, the one half of the building is the exact counterpart of the other, like two of the reflections in a kaleidoscope. In tracing the building from the base to the summit, there is, as in tracing the human figure from the feet to the head, an unceasing variety of form; in tracing any part of the building from side to side on the same level, there is, in most specimens, an exact uniformity. When variety is introduced, latitudinally, on the same level, it is minute, and it must be repeated at the corresponding position on the opposite side of the perpendicular central line. The Gothic, or more early middle-age architecture, follows nearly the same rules. In more modern architecture of the same kind, more variety of form is introduced; the greater variety in some measure compensating for the deficiency of uniformity. But even that variety must have its limits, and must be subordinate to order and symmetry. A building patched up of Grecian, Gothic, Saracenic and Chinese architectures, would be a mass of deformity.

Poets must act on the same principles. They must convey ideas and feelings of order and symmetry in their rhythm, the structure of their stanzas or periods, or their rhyme; also in the general structure of their poems. Whether longer or shorter, they must, to be beautiful, have a certain symmetry of parts. There must not be a long elaborate exordium to a short poem, nor episodes out of proportion to it; but its various parts must be in keeping with a central aim or principal subject. It must also have variety, as much variety as the structure of the verse and the nature of the subject will admit of. The poet, therefore, is not confined to the rigid order of the historian, or the essayist, whose chief object is truth, and not beauty; but may take a more excursive range, with more abrupt transitions. The relation which the Iliad, the Æneid, and Paradise Lost, bear to history, and which Pope's Essay on Man or Cowper's poems bear to prose essays, will show what liberties must be taken with narrative or discussion, to make it poetically beautiful

The artificial production of the sublime.

In producing feelings of sublimity, as of beauty, the artist has a wider range than merely suggesting objects which are sublime in themselves. Objects and scenes which, seen immediately, would be simply horrible and terrific, may, when brought before the mind, in the mitigated form of painting, or music, or poetical description, produce the feeling of sublimity. The consciousness of perfect safety, while contemplating a terrific scene, leaves the mind at liberty to appreciate the sublimity of it. Bonaparte is said to have declared that the view of the conflagration of Moscow from the Kremlin, was the sublimest sight he had ever seen. In a mind less inured to scenes of human misery, the mass of wretchedness involved in that catastrophe, the deeds of rapine, and cruelty, and lawless lust, which he well knew were being perpetrated, and the danger of intense suffering to which his own army was exposed by it, would have left room for no feeling but intense distress and anxiety. But he was personally safe himself, and the sufferings of others, or the perpetration of the most enormous crimes, gave him little concern; so that he had composure sufficient to note and appreciate the sublimity of the scene, notwithstanding the unexampled horrors with which it was accompanied. The feeling of sublimity is produced by means totally different from the feeling of beauty. Clearness of sound or of colour, harmony, symmetry, variety, are rather unfavourable to it than otherwise. Whatever calls up thoughts of vastness and power, obscurity or mystery, contributes to it.

In music, sublimity is attained chiefly by conveying the conceptions of great multitudes under the influence of various strong emotions. Many of Handel's choruses are eminently so. In one passage in Haydn's Creation, the idea of a shriek arising out of some dark and troubled scene, is conveyed with great effect, and is terrifically sublime.

The painter's power of awakening sublimity lies chiefly in calling up thoughts of vastness or power:—huge objects looming through twilight or mist, tempests by sea or land, dark and furious passions in operation, and the avoiding of too distinct lights and outlines, and high finishing.

The architect's sublimity lies chiefly in the greatness, massiveness, and simplicity of his structures. The pyramids of Egypt and its colossal statues are sublime from their vast bulk. The high finish and beautiful proportions of the Grecian temples were unfavourable to sublimity. St. Peter's, at Rome, St. Sophia's, at Constantinople, and St. Paul's, in London, and other similar structures, are sublime from the power that is suggested in sustaining their vast domes at so great a height. The Colosseum is sublime from its prodigious extent, and the simplicity of its structure. It is incomparably more so in the obscurity of the twilight or moonlight, than in the blaze of an Italian day. Its architectural ornaments add little to its beauty, and they detract from its sublimity. St. Peter's is less beautiful, but more sublime, than St. Paul's, not only from its greater bulk, but from its being more simple in its ground plan, and less ornamented.

The sublimity of the statuary consists chiefly in his conveying ideas of great strength of body, or great power of thought, or of character. There is a prodigious massiveness in some of the figures of Michael Angelo, and a kind of obscurity produced by their postures, and the positions in which they are placed with respect to light and shadow, which contributes much to their sublimity.

The poet has a wider range for the production of sublimity than any of the other artists. The whole range of nature, material and mental, and the whole illimitable range of actual or possible events, are at his command to cull from; and to produce sublimity, he must seek to call up the same conceptions with his fellow artists, vastness, power, scenes of terror veiled in obscurity and indistinctness, yet sufficiently distinct to convey vividly the general features of them. Blank verse seems more favourable to the sublime than rhyme. It would seem scarcely possible to excite feelings of sublimity by the smooth and polished couplets of Pope, or even by the rougher and more manly couplets of Dryden. Irregular versification seems also more fitted for awakening feelings of sublimity than of beauty. Although, perhaps, the sublime has never been more perfectly attained than in some of the stanzas of Campbell:—

> "As we drifted on our path,
> There was silence deep as death,
> And the boldest held his breath,
>   For a time."

Or, again, in his "Hohenlinden,"—

> "Then shook the hills, by thunder riven,
> Then flew the steed, to battle driven,
> And, louder than the bolts of heaven,
> Far flashed the red artillery."

We know of nothing in any language more sublime than these stanzas, and the more so from their simplicity. There is no effort to get up sublime scenes, but the happy choice of a few features, and the admirable selection of words, effect what pages of elaborate description would fail to do: but it is sublimity rather in despite of the regular pulse of the rhythm, and the chime at the ends of the lines, than by the assistance of these adjuncts.

3. There is one quality in any piece of art necessary to the production of the effect of either beauty or sublimity, and which, when attained, eminently tends to the production of either effect, namely, truthfulness. By truthfulness, we mean the execution of the work of art being in conformity with the obvious design of it. Every work of art aims at exciting some emotion. If no such design can be discovered in it, then it is without meaning, and can scarcely be regarded as a work of art. Now the execution must be in conformity with the obvious design of the artist, else it can neither be sublime nor beautiful.

A musician intends to be elegant and gay, but he produces a piece of mere common-place vulgarity; his piece is destitute of beauty. He wishes to be great and sublime, but he produces mere noise, and rattle, and bustle; his work is instantly rejected.

A painter designs to excite the emotion that would be excited by a noble range of buildings; but his perspective is palpably inaccurate, and no other beauty can compensate for deformity. He intends by the situation, and attitude, and countenance, to convey the conception of a man under the excitement of great terror; but the drawing of the figure is inaccurate, and he has made him only gape and stare; his work is utterly destitute of either beauty or sublimity.

The design of the architect is usually indicated by the purpose for which the building is intended. And then truthfulness consists not in its being fitted for its intended use, but in its exciting emotions in accordance with its intended use. A building may be admirably adapted for the purpose for which it is intended, and yet, in regard to taste, may be a mere mass of deformity. But if the architect succeed in producing an emotion in accordance with the intent of the building, he has so far succeeded in rendering his work sublime or beautiful. A prison, for example, should convey an impression of strength and security. We remember a prison somewhere in Scotland, in the Corinthian order, with its slender and ornamented columns—it was a piece of deformity. A church should convey the feeling of sobriety, solemnity, and sublimity. To give it the appearance of the strength of a prison, or the lightness of a ball-room, is an outrage on taste. A music-room, or other place of amusement, should convey the impression of lightness and elegance. Such a building, with the lancet windows, the massive columns, and vaulted roof of a medieval church, would be a ludicrous object. Scarcely less absurd is an hospital or infirmary with the light and flaunting exterior of a ball-room or a theatre.

A poet, by writing in measured lines and stanzas, and in poetical language, obviously intends to heighten the pleasure which his matter expressed in prose would yield by the tasteful choice and harmony of his language; but if he makes slips in grammar, or in the rules of composition, or if he introduce vulgar or provincial rhymes, or betray himself introducing sentiments for the sake of rhyme, he belies and frustrates his obvious intention, and his poem is instantly rejected; whereas if he succeed in conveying his sentiments in chaste, elegant, and harmonious language, his poem possesses one beauty, which, with many, will compensate for the want of beauties of a higher order. A poet, it may be, is obviously aiming at the delineation of a certain description of character. This intention he gives you to know by the circumstances in which he places him, and by what he says of him, or represents others as saying of him. If he succeed in making him speak and act in accordance with his character, as indicated or described, he has graced his work with one of the most admired beauties of poetical composition. But if the drawing of his character be unnatural, or inconsistent with itself, or if he make him speak and act inconsistently with his delineation, then his whole aim is converted into a blemish, and brings upon him contempt, the invariable punishment of a detected want of power to effect an obvious intention.

While the want of truthfulness is fatal to the attainment of beauty or sublimity, the possession of it often gives beauty to objects in themselves the most homely and destitute of beauty. A farm-yard, with poultry, pigs, horses, cattle, farm-servants ; a school of disorderly children ; peasants in their most homely dresses and employments, become beautiful when they are represented or described naturally; that is, truthfully. It is this quality that forms one of the chief beauties of Dutch paintings. The celebrated painting of a young bull at the Hague, which is known all over Europe, has little else to commend it but its truthfulness. Cowper's exquisite little vignette of the sparrows peeping from the eaves of the cottage, thievishly resolved,—his picture of a domestic party at tea, with the reading of the newspapers, are beautiful, chiefly from the same quality.

We conclude, therefore, that there are qualities in external objects which are the original sources of our appreciations of beauty or sublimity; that there are mental qualities which are felt to be beautiful or sublime from their producing effects, on the contemplation of them, analogous to those which are produced by beautiful and sublime objects in external nature; and that in artificially exciting the feelings of sublimity, artists of every kind must attend to these natural sources of the sublime and beautiful; but that they have a range much beyond the use of natural beauties, material or mental, by the recalling of whatever is fitted to give pleasure, or to fill the mind with conceptions of vastness or of great energy, or to inspire it with awe.

CHAPTER IX.

THE RECOGNITION OF MENTAL STATES AND OPERATIONS IN THE INFERIOR ANIMALS.

We recognise mental states and operations in the inferior animals on the same principles on which we recognise mental states and operations in our fellow men, but somewhat modified. We see power exercised by them over the members of their bodies, and exerted with design. We see them move their limbs or other members of their bodies, for the purpose, it may be, of removing their whole body from one place to another, of walking, running, flying, swimming; and we can often detect their purpose in these movements, it may be, to seize and eat their food, or to collect materials for their dwelling-places, or it may be to lay up a store of food for the future, or it may be in compliance with our invitation, or obedience to our commands. We, therefore, infer from these indications of design in their movements, that their movements are not mechanical, like motions of the air or of water, or of trees when shaken with the wind; but that they are the effects of a mind possessing power over the body, and will to exercise it, or to abstain from exercising it, similar to our own power and will.

The emotions of the inferior animals.

We see that they eat and drink as we do; that, if they be deprived of food or drink, they languish and die as men do. We see them rush towards their food, and seize and devour it; and we ascribe to them hunger and thirst and desire of aliment.

We see that many tribes of them, when injured, utter loud cries, and run away from that which injures them; and we infer that such animals feel pain when their bodies are injured, and are afraid of what injures them.

We see that some, when they are injured, fly upon and attempt to injure those who have injured them; and we ascribe to such animals anger and revenge, because anger and revenge elicit similar movements in us.

Sometimes very complicated emotions may be observed in some of the inferior tribes. Of this we have a pretty example in the story told by Cowper of his little dog. When walking by the side of the river Ouse, he had attempted to reach a water-lily with his cane, but failing in his attempts, he pursued his walk, the dog gambolling before him. It appeared, however, that the considerate animal had—

> "Puzzling set his puppy brains
> To comprehend the case."

For when on his return he came near the water-lily, the dog of his own accord sprang into the river, cropped the water-lily, and brought it and laid it at his feet. Besides the sagacity exhibited in this act, there was the indication of much delicate and amiable feeling.

We remember observing a dog following his master to the foot of a ladder, set up against a high house, and reaching to the parapet. The master began to ascend, and the dog began to bark and to exhibit uneasiness. As the master got higher he began to whine and to howl; when the master was near the top he ran away, but occasionally stopping and looking up; but when his master had got over the parapet, and was looking down from what seemed a place of safety, he came and sat quietly at the foot of the ladder.

We observed another little dog run out furiously to bark at a horse that was trotting along the street with a coal porter on his back. The man had a long whip, with which he made a cut at the dog, which took effect very decisively on his nose. The dog emitted a very suppressed yelp, and stood in the middle of the street, looking after the man and horse till they were out of sight, when he turned to the side of the street, sat down, and rubbed his nose, whining and yelling most piteously. It is scarcely possible to deny to this dog very high sentiments of pride, and a mind that could ill brook disgrace.

One of the most eloquent appeals we have ever known was made by a cat. On the eve of her confinement she had selected a press in which clothes were kept, as a suitable place in which to meet so interesting a crisis. But the mistress of the house happening to have occasion to go to the press, found it open, and Mrs. Puss with one kitten snugly bedded in it. She turned them both out, locked the door of the press, leaving the poor mamma to find other accommodation where she might, and being busy with other matters, forgot the whole transaction. In the course of the day, however, Mrs. Puss appeared in the parlour with her kitten in her mouth, and went directly up to the lady who had so unceremoniously ejected her from her comfortable bed-room, laid down her kitten at her foot, and then looked up in her face and mewed. The appeal was irresistible, and suitable accommodation was provided for her and her little nursling.

Besides such acts as these, evidently the result of feelings which we can appreciate, many of the inferior animals have means of expressing their emotions by the sounds that they emit, or by their gestures, or by a certain power over the muscles of their faces. They have their audible notes of pain, of fear, of anger, and of pleasure, their gestures indicating the same emotions; and some of them in their anger draw up their lips, so as to expose their teeth, as significant of their inclination to bite. The different species of animals seem distinctly to understand these indications of emotions in their congeners, and even in the animals of other species and genera; and, to some extent, these signs are like a natural language, intelligible to mankind, or very soon become so by experience.

The intellectual operations of inferior animals.

Many of the laws of suggestion of which we are conscious we can detect in them. Many animals may be put in mind of pleasant or unpleasant sensations by being brought to the places where such sensations were experienced, or by the exhibition of an implement with which pain was inflicted, or by the presence of the person who inflicted it, or by the exhibition of the vessel in which they were accustomed to receive their food, or of one similar to it.

We can observe in them very exact discrimination of qualities in external objects, particularly in distinguishing such as are proper for food from others that may very closely resemble them. They are not infallible in their discriminations; but, when they make any mistake in that respect, it is usually under the influence or by the artifices of men.

Their intellectual faculties are employed chiefly in obtaining their food, constructing their habitations, and otherwise providing for the preservation of their species. In these particulars many of them, as the beaver, the ant, the bee, many species of birds, manifest surprising skill and foresight.

But there are decisive evidences that that skill and foresight have a different origin from skill and foresight in man. In the first place, their skill and foresight are exercised within a limited range, beyond which they are absolutely destitute of these qualities. Again, the apparent foresight of some in providing for their future progeny is so far beyond their experience and means of knowledge as to indicate that it is not their own. An insect laying her eggs on that precise species of plant which is fitted for the food of the grub that is after a long period to issue from her egg, and a plant of which she herself cannot eat, indicates a source of foresight very different from human intellect. Again, the skill and foresight of inferior animals are obtained without teaching or experience. Birds hatched by those of a different species adhere to the practice of their own species, of which they may never have seen a single example, without being in the slightest degree modified by the practice of the foster parent. Still further, no amount of teaching, or training, or example, can enable an individual of one species to imitate the habits of another. A sparrow can never be made to build a nest like a swallow, or a swallow a nest like a sparrow. Ducklings may be hatched and cared for by hens, or chickens by ducks, yet the young adhere in all respects to the practices of their own real parents. And, lastly, the practice of each species continues perfectly uniform in all ages and in all parts of the world. The sparrows among the Himalayan mountains are precisely the same in their habits with the sparrows in Britain, and the habits of sparrows from the earliest notice of them were the same as they are now.

From these and similar phenomena we infer, that the skill and foresight exhibited by many tribes of inferior animals flow from a different power of mind from that which gives rise to skill and foresight among men; and that different source we call instinct: but what instinct is, and how it operates, is a profound mystery. We are shut up to the conclusion that their skill and foresight originate in the wisdom of the great universal spirit who constructed them; but how communicated by Him to them is a question above the range of our faculties.

The mental states and operations *excited in us* by the presence and acts of inferior animals are similar to those which are excited by the presence and acts of our fellow men. Our discriminating power is employed chiefly in discerning their character,—that is, their power of doing us good or evil, and, in regard to the higher classes, their disposition to do good or evil. Our emotions excited by them are such as fear, anger, revenge, hatred, on the one hand; or admiration, affection, gratitude, on the other. We do not mean to say that these emotions are always rationally or justly excited towards them, but merely state the fact that they are excited. Cowper expresses much gratitude and affection for his little dog in consequence of his exploit about the water-lily. On the other hand, we may be very angry with a cat for killing a favourite bird, while yet we bestow on her all manner of commendations for killing a mouse. Yet it is scarcely to be expected that puss should be able to comprehend why she should be pursued and beaten for the one act, and commended for the other.

Our inferences and reasonings about the inferior animals are akin to our moral inferences and reasonings respecting our own species, but partaking more of the precision and certainty of our inferences and reasonings about inanimate objects, in consequence of the more exact and constant uniformity of the instincts of each species, so that when the species is clearly ascertained we can reckon with more certainty on their acts, or our power of acting upon them.

CHAPTER X.

ON THE RECOGNITION OF THE DEITY.

From the platform to which we have brought up the soul, by means of its combined sensations, perceptions, and recognitions, and its intercourse with other minds, it reaches the highest attainment of which the mind is capable, and which, more than any other, distinguishes it from its fellow inhabitants of this planet, namely, its recognition of the being and attributes of the Deity.

The mind has not indeed precisely the same means of recognising the presence and mental movements of the Deity which it has of recognising the presence and mental movements of its fellow men. He does not inhabit a body like their own, and manifest his mental movements by motions of such a body, similar to those movements of its subject body, and by which it manifests its movements; but it possesses that kind of evidence of the being, the power and will of a mind, or spirit pervading all nature, which it possesses of the existence and power and will of a fellow man, when it examines any of his works in his absence; and it possesses that kind of evidence to an infinitely greater extent, and in infinitely greater perfection.

We have already had occasion to remark that, when we examine a collection of machines or of paintings, we instantly infer that they were formed by human skill and power, and that we examine them as if we were examining the design and skill and power of the former of them. Fenelon's reference to the marks of design and power in a watch, of which Paley has made so good use in his "Natural Theology," furnishes incontestable proof that no sane mind could see and examine such a work of art, and discover the use of it, without inferring that it was the work of a human mind contriving it, and acting on the members of a human body to execute the contrivance.

Now, we have evidences of the same kind everywhere around us of the existence, intentions, power, and will of an all-pervading, though invisible mind. Every organised body, every plant, every animal, furnishes stronger proofs of design and power and will than a watch does; and when we become acquainted with the composition of unorganised substances, as air, water, earth, stones, we learn that there are in them evidences of intention as clear, with evidences of wisdom and power more wonderful, more surpassing our comprehension, than even in the structure of plants and animals. We are in the midst of a vast workshop of machines, exhibiting every conceivable description of mechanical contrivance—a vast cabinet of the most glorious pictures, the source from which all pictures derive their beauty, and copies of pictures repeated ten thousand times over with the most perfect exactness; so that it seems to be scarcely possible that any rational creature, looking on these objects, should not see and feel that he is looking on the productions of an all-powerful, and all-skilful mind, who has contrived all these wonderful things, and produced them in such amazing perfection.

We are conscious of forming designs for converting material substances to our own use in various ways. We are conscious that, by the power of our will over our bodily frame, we can, by digging, cutting, hewing, rubbing, and other operations, convert various kinds of material substances to various implements for our conveniency. We have sometimes to avail ourselves of the general laws of matter, and sometimes our employment is to counteract some law by artificial contrivances. Now we see machines everywhere around us, formed for particular purposes, the maker of which has availed himself of the same laws of matter which we have to work with, and has often employed one law to counteract another, so as to produce an obviously intended result. The bodily frame of animals is formed on the same mechanical principles, of which we must avail ourselves if we would imitate them. Use, in some instances, is made of the weight of the body to enable the animal to procure its food, while, in other instances, there are contrivances for counteracting the weight of the body, and enabling it to float high in the air. We see contrivances for combining lightness with the requisite strength. All the mechanical powers are brought into requisition. We see levers of various kinds in operation, joints and hinges of various kinds, the tightening and slackening of cords, contrivances for impelling heavy bodies through the air, or through water, or over the surface of the ground; contrivances for enabling animals of various kinds to procure their necessary food. We see, therefore, everywhere around us as palpable evidences of design, and of power to execute design in the material world which we inhabit, as we see in visiting a museum of the works of art. We are conscious that our own designs proceed from the mind, and are executed by its direct power over the members of the body, and its indirect, or mediate powers, by means of the body over external substances; and we therefore infer that the designs which we see on every side are formed by an all-pervading mind, and are carried into effect by a power over all matter, similar to that which we exert over the muscles of our body, but infinitely more perfect. Nothing short of the most absolute power over every separate atom of matter, to arrange all of them in any order, so as to give its peculiar form and use to every object in the universe of matter, would produce the results that we everywhere witness.

We have stated that we have not precisely the same evidence of the presence of the Deity that we have of the presence of the mind of a fellow man, because he does not connect himself with a body like our own, and express the movements of his mind, by movements of that body, similar to the movements by which we make manifest the movements of our minds; but that we have that kind of evidence of the existence of the Divine mind that we have of the existence of a human mind, when we inspect any of the works of men in their absence. But we now further observe that we have that kind of evidence in a much more perfect form, and with infinitely greater power and variety than we have for the existence of other minds than our own. For,

1. We see many of the designs of the Deity actually being executed and completed before us. We see herbage of vast variety and beauty produced under our eye, and covering whole tracts of ground previously bare of covering, and innumerable living creatures formed to people places previously tenantless. Suppose, for example, a piece of plain bare cloth were spread out before us, and that while we were looking at it, curiously formed, and beautifully coloured pictures of flowers, trees, fruit, insects, birds, quadrupeds, men and women, began to cover it, all perfect in their forms and colouring, the same forms repeated with the most minute exactness in various parts of it; and the whole, when completed, exhibiting the aspect of an exquisitely-wrought carpet, while yet no artist appeared; we should infer that some human hands, or some machinery was at work below the cloth which was throwing up these regular and beautiful pictures, that the work could not be accidental, but must be the effect of design and power in actual operation. Now does not every meadow, every copse, every morass, exhibit precisely this indication of a designing powerful mind at work, although we cannot discover it, nor discern any bodily frame that it inhabits? Does not every season of the year present to us myriads of plants and animals, springing up into being, formed with perfect regularity, and forms precisely

similar repeated a thousand and a thousand times? And how can any man be so blind as not to see the energy of a planning and executing mind actually at work? It does not make the wonderful exhibition less, but more wonderful, that these forms are produced in a certain regular order. It would not make the filling of the carpet, which we have supposed to be figured under our eye, less, but more an evidence of design and power, that we were permitted to see the wheels and levers, the various coloured threads, and the needles inserting them in the underground machinery, by means of which the effects were produced. So neither does it render the clothing of any portion of the earth with vegetation at stated times, and peopling it with animals, less but more wonderful, that we are permitted to see a little of the machinery that is at work;—plants shedding their seeds, animals depositing their eggs, the sun rising upon it and warming it, the rain watering it, the air sweeping over it. All these, and many other steps in the progress towards the result, only render stronger and more impressive the evidence of a mind at work, possessing intellect of the highest conceivable order, with will and power to execute its purposes.

2. This kind of evidence of a mind possessing intellect to design, and power and will to execute, at work in external nature, is infinitely stronger than any evidence that we possess of the existence of other human minds in any of the works of men; because the evidences of design and power in external nature are infinitely more distinct, and more varied, than in any or all the works of man. The evidences of design, accompanied with power in external nature, are, in regard to our powers of estimating them, infinite. Not a root, nor a stem, nor a leaf, nor a flower, nor a seed of any vegetable, but possesses innumerable evidences of design. Not a limb nor an organ of sense, not a feather, nor a hair, nor a scale, not a heart, nor an artery, nor a nerve, nor an in-

testine of any animal, but possesses still more wonderful indications of mental power. The more deeply we search, the more do the wonders of the planning and executing mind of the Deity crowd upon us. Taking the most superficial view of the structure of animal bodies, we see common mechanical principles employed in giving them the power of locomotion, and of finding and masticating their food. The eyes, ears, legs, wings, fins, claws, teeth, of various tribes of animals, are wonderful specimens of mechanical skill. When we look deeper, and consider how the food is assimilated, so as to form and sustain the various parts of the body, —the bones, muscles, skin, hair, feathers, scales, and, for that purpose, examine the stomach, bowels, heart, lungs, veins, arteries, nerves, of the animal, we find ourselves in the midst of a system of mechanics that perfectly fulfil their purposes, but which pass beyond our powers of investigation. When we look to the food itself of animals,—namely, the vegetable kingdom, on which the animal kingdom depends (for, although many animals feed on other animals, yet, the animals on which they feed are sustained by plants), we find a new and beautiful system of assimilation, by which inorganic substances are converted into the infinite variety of vegetable substances. When, for example, we learn that much, if not all, of the most solid parts of vegetables is derived from the light invisible air, we find ourselves standing amidst new scenes of wonder. When we proceed further, and examine the inorganic substances which form the food of vegetables, new wonders of design and power await us in molecular forms and motions, contributing, by various combinations, to produce the various qualities of unorganised substances,—their specific gravity, their crystalline forms, their consistency, solidity, fluidity, elasticity, hardness softness, toughness brittleness, their smell, colour, taste, and innumerable others. When the mysterious agencies of imponderable bodies rise before us,—light, heat, electricity, magnetism, the subtility of their nature, the almost infinite velocity of their motions, combined with the important parts which they perform among all—even the most massive of material things—we are still more bewildered amidst the wonders of that intellect and power which bends their agencies to its purposes. When we pass from material agencies, and glance at the instincts of animals, and observe how perfectly fitted these instincts are to the forms and powers of their bodies, for sustaining their lives, and prolonging the existence of their species, yet the measure of discretionary power which they enjoy, to accommodate themselves to their circumstances, we see design, indeed, in the creation of these instincts as distinct as in mere matter; but the mode of the execution of the design altogether beyond our comprehension. There is a wisdom and power here not only which we cannot fathom, but of which we can form no better conception than that it exists and is everywhere manifest. When we lift our eyes from this earth to the universe of matter around us, we see the same evidences of design and power, but on a scale of magnificence incomprehensible. We see the same principles of order there as on the surface of the earth,—motion and attraction balancing one another: motions of prodigious power bridled, controlled, and regulated by another power, that we call attraction. But whence these stupendous motions? Who launched forth these huge and massive bodies with such amazing velocity; and what is that attraction which controls them, and binds their headlong velocities to regular orbits;—are questions that would strike us dumb if we did not discern in them a designing mind that urges them on their flight, while he holds the reins which command and direct them.

But may not these evidences of design and power and will employed in the structure and government of the universe, indicate the design and will and power, not of one intelligent being only, but of many? Certainly not; and for two reasons.

1. That gradation of being which has been noticed by all who have thought or written on the subject, by which the various departments of nature gradually merge into one another, leaving no gap between them, renders it impossible to ascribe one department to one creator and governor, and another department to another creator. Solids, fluids, and gases, are so connected together, the same substance being sometimes in one state and sometimes in another; fossils and organised substances, plants and animals, the various tribes of plants and of animals, trees, shrubs, herbs, fowls, fishes, insects, reptiles, quadrupeds, so gradually melt into one another, as to render it scarcely possible to determine where the one class ends and the other commences. The moon, with its mountains and valleys and plains, and its extinct volcanos, is obviously of the same structure with the earth. It bears a relation to the earth so similar to that of the satellites of Jupiter or Saturn, to their primaries, that both primaries and satellites must have had the same Creator. The sun is a star, only much nearer us than the other stars; the smaller stars are manifestly so identical in kind with the stars discovered in nebulæ, and the nebulæ which have been resolved by telescopes, and found to consist of stars, are so manifestly of the same kind with those nebulæ which no telescope has yet resolved, that one mind and will must be the creator and governor of all. It is thus one of the beautiful marks of design in the universe, that the Creator of it has so made the various departments of nature from the sand under our feet to the most distant nebulæ melt so into one another, as to leave no opening even for the surmise that there might be more creators and governors than one.

2. But the great irrefragable proof that the whole material universe, so far as we have the means of

knowing it, is the product of one designing intellect, directing one all-powerful will, is, that all the parts of it are mutually dependent on one another. The sea, the dry land, the air, the vegetation that clothes the land, the animals that people both sea and land, could not exist in their present state independently of one another. The sea is kept full by the rivers that run into it from the dry land. The rivers are supplied from the sea. The atmosphere is the medium of communication by means of which the vapour from the ocean is carried to the land and condensed there into the water that forms the rivers, that water the earth, and replace the waters abstracted from the ocean. The whole of these processes depend on the influence of the sun. The attraction of the sun keeps the earth in its regular revolution; the heat of the sun keeps the air, the sea, and the dry land in their relative positions. The light of the sun is necessary to vegetation, and without heat, light, and plants, there could be no animals. The portion of light which the sun sends to the earth is exactly accommodated to the myriads of living creatures in various habitats, so as to afford to all light enough, and not too much. Some sentimentalists, looking on the glory of the sun, and the beautiful tints with which it colours an eastern or western sky, have spoken as if that glory were in the sun itself, and have all but paid adoration to it, as the first idolaters really did. A little reflection would have taught them that all that glorious appearance depends as much on the nature of the atmosphere, nay, on the structure of their own eyes, as on the emanation of light from the sun. Were there no atmosphere, there could be no glorious sunrise or sunset. Were their eyes a little less sensitive, it would not appear more glorious than a glimmering taper; or if they were a little more sensitive, it would be a cause of agony and an object of horror, from the torment of which they would be fain to hide themselves. The glory is not in the sun, but in the exact adaptation of the light of the sun passing through the medium of the atmosphere to their eyes, and their eyes to it. And what is that adaptation but another name for the wisdom and power of the Deity? Inhabitants in Mercury might, in consequence of the structure of their eyes, not be more dazzled by the sun's brightness than we, nor more oppressed with its heat; while inhabitants in Saturn or Uranus might see as clearly by it, and feel its heat as oppressively as the inhabitants of our torrid zone. The whole planetary system depends for its order, its very existence, on the sun; and it is probable that the sun itself, with its planetary attendants, depends on some other body still more remote from us. Thus again we see that He who constructed the universe has so designed and executed his design, as not to leave room for even the surmise that there could be more creators or governors.

It is this clear indication of the design and power of one pervading mind presented by the whole universe, and by every separate part of it, even the most minute, that binds it together as one magnificent temple, or rather, one magnificent and stupendous piece of machinery; and will not permit us to regard it as a mere aggregation of antecedents and consequents. Now our conception of the universe as the product of design and power is formed upon precisely the same kind of evidence, but infinitely more satisfactory, and more extensive, than our conception of a watch or a steam-engine as the product of the skill and power of another human mind than our own And both of these conceptions are founded on our consciousness of design in ourselves to arrange and modify material substances, so as to render them subservient to our purposes.

But, further, we have in the material world around us, not only evidences of design and power, but indications of many other mental attributes of the great Designer of the glorious work.

If, for example, we should visit the repository of a mechanician, and see that his machines were not only perfectly adapted for their different purposes, but that their forms were the most compact, the most simple and elegant, of which the nature of each machine would admit, all arranged in perfect order, the nicest contrivances for keeping them exactly clean, as well as in perfect working condition, and that those of them that were capable of embellishment were ornamented with the most chaste and delicate taste; by the symmetry of their forms, their colours, nay, their fragrant smells, the sweet sounds emitted by them, wherever these could be introduced with propriety; we should say, this mechanician must have great delight in what is orderly and beautiful, for he is not satisfied with accomplishing his object, but he must in the execution of it awaken in the soul feelings of exquisite beauty and refinement. Need we add that these are the characteristics of that mind which pervades the universe—infinite wisdom in adapting means to ends, forming high and glorious purposes, infinite and most exact power to effect his purposes, power that can launch a world on its course, or polish the eye of the minutest insect; and this infinite power and wisdom accompanied with the love of order and beauty, and with perfect knowledge of the means of communicating the pleasure arising from the appreciation of order and beauty to other minds that may contemplate his works.

Nor are we left without clear indication of what in men we would call their character or disposition, but what in the Great Creator we call moral attributes. If, on visiting the repository of a mechanist of high reputation, we should see that all his machines were contrivances for promoting human comfort, we should infer that he must be a benevolent man, not to deem it beneath the dignity of his great talents and experience to be employed exclusively about contrivances to assuage pain, to remove nuisances, to promote comfort, to prolong life; and that nothing was overlooked by him, not the safe exercise and amusement of the little child, nor even the comfort of the little bird that sings in our parlour, or the bee that stores up its honey in our garden. Now, such indications of beneficent care for the happiness of his creatures we discover in all the works of the Great Creator. We see the wants of all provided for,—suitable food placed within the reach of all, suitable clothing provided for them with wonderful skill, the heat and cold attempered to the structure of their bodies, and to their habitat and mode of life, their inclinations and enjoyments, so that every class of animals is fully satisfied with its own condition and means of enjoyment, and exults in the exuberance of life and vigour.

If, on the other hand, on visiting the repository of a mechanician, we should see that all his machines were contrived for mischief,—for the destruction of life and property, for occasioning annoyance and discomfort,—we might fairly draw the conclusion that he was a man of a cruel, morose, and malignant spirit.

We visit an armory, and enter into conversation with the keeper of it. We ask, "What is the use of that sharp-pointed piece of polished steel at the end of a pole?" "That," he tells us, "is used in stabbing men at some distance from us."—"But here are some similar sharp-pointed instruments without the pole,—what are these?" "These, you observe, have a short handle, and they are made for the purpose of stabbing men when they are close upon you."—"Here, again, are some pretty long steel intruments, like large carving knives, with a sharp edge, and some of them very beautifully ornamented,—what is the use of these?" "These are made to cut and hew down men, especially if the person who uses them be on horseback, and the men to be cut down on foot. You may observe that some of them have sharp points as well as sharp edges, so that they may be used either for cutting or stabbing, as may be found most convenient. And nothing can be more glorious than to see a long range of men on horseback, in scarlet dresses, trimmed with gold, and feathers waving in their caps, cutting, stabbing, and trampling under their horses' feet a multitude of men, and the rapidity with which the work is done. At the battle of Salamancá, about 1500 men were cut down, and their blood and bones trodden into the earth, in about fifteen minutes."—" We shall say nothing of the glory of such a scene at present; but what are these smaller, lighter strips of wood, with a sharp point at one end and a feather at the other?" "These are called arrows; they were shot from bows, and men could be killed by them at the distance perhaps of fifty yards. Some of them, you may see, have barbs, or a sort of sharp hooks, behind the sharp points; the use of that contrivance was to prevent an arrow, that had penetrated the body of a man beyond the barbs, from being drawn out without cutting the flesh round about the wound to a considerable extent; thus adding greatly to his torture, and danger of death. A further improvement on this contrivance was, that the points of the arrows were sometimes poisoned; so that nothing could save the life of the person who was wounded with them, however slightly. But these implements of glorious warfare have long been superseded, among all well-educated, scientific and polished nations, by machines of much greater power. You observe this iron tube fixed in a wooden stock. By putting a little of a substance called gunpowder into the tube, a bullet may be darted from it with such velocity that a man may easily be killed by it at the distance of two hundred yards, or by a random shot at a much greater distance."—" But we observe that some of these tubes have a sharp pointed instrument fastened to the end of the tube,—is that also darted to a distance by the gunpowder?" "O, not at all! That is a very ingenious and admirable invention. You may observe that it is fastened to the tube in such a manner that the bullet passes through the handle of it; so that if the person who uses it has attempted to shoot a man at a distance, and has missed his aim, he can then run at him, and stab him with the sharp-pointed instrument, which we call a bayonet, at the end of his iron tube, which we call a musket or carbine. But here is a machine of the same nature, but of much greater power. You observe the tube is much wider, and capable of receiving a much larger quantity of gunpowder. It is called a cannon, and will dart out a ball of six, ten, twenty, forty, or as high as sixty pounds weight, so as to kill men at a vast distance, break in the sides of ships, sink them, and drown all the people on board of them, break down the ramparts of fortified places, and admit soldiers to massacre their garrisons."—"Very wonderful! But pray what is that large globe of iron, with a little hole in it?"—"That is a very ingenious machine. It is, as you may see, hollow, and when it is to be used, it is filled with gunpowder, and fired off from a short wide-mouthed cannon, called a mortar, and if it light upon a house, it is so heavy that it will break down through the roof, and through the different floors to the very ground, and then it will explode and blow the house, and every person in it, to atoms."—"But, then, might there not be women and children in the house, and might they not be destroyed at the same time?"—"Doubtless a besieging army cannot tell in what houses there may be women and children, and these must only take their chance in such cases. But the most recent and most scientific invention is this large, long, pointed thing, which we call a rocket. If these be pointed towards a city, and fire applied to them, they will fly off with great velocity, with a long train of fire blazing from them; they will stick to the roofs of houses, enter at windows and doors, and, as they cannot be extinguished, they will set a whole town on fire in an incredibly short space of time."—"These are all very ingenious and very wonderful machines; but who invented them?"—"Various distinguished individuals; some philosophers, some officers in the army and navy. A monk, for example, is said to have discovered the power of gunpowder; but I assure you it was not in a day that they reached their present perfection. These machines are the result of the accumulated study and skill of many centuries, especially among scientific polished Christian nations."—"We have observed machines similar to some of these described by Milton; but he ascribes the invention of them to the devil. He must, however, we suppose, be in error."

Now, when we look abroad over the face of nature, we everywhere see the most consummate skill at work in providing for the enjoyment of all sensitive creatures, from the largest to the most minute. It is true, there are creatures furnished with formidable implements for preying upon other creatures. But, in the first place, these powers of destruction are not employed in perpetrating acts of wanton cruelty. They are given to the creatures that possess them for enabling them to procure their food. In the next place, to the creatures on which they prey, death is not the same formidable event that it is to men. None of them live under the apprehension of it before it comes. When it does come, it appears to be accompanied, in a vast majority of cases, with very little pain. Facts have been observed, indicating that, in the tribes of fishes, reptiles, insects, and molluscs, sensitiveness to pain is very small; the loss of a limb, or even some more essential part of their body, scarcely interrupting them in eating their food, or in the ease and freedom of their movements. But it must be admitted that there are scenes of revolting cunning and ferocity among the inferior animals, from which it is impossible for a sensitive mind not to recoil. To account for these perpetual exhibitions of cunning and ferocity, of stronger animals preying on the weaker, seizing upon them, tearing them to pieces, devouring them, or sucking their blood, we must remember that, among the highest order of creatures on the earth—the only creatures capable of moral good and evil, there is a fearful amount of moral turpitude, and violent propensity in the strong to oppress the weak—an appalling selfishness, and rapacity, and cruelty; which malignant dispositions, in rational and moral creatures, created capable of being governed by the laws of justice and humanity, must be held in deep abhorrence by that Being whose operations are manifest everywhere, and whose goodness and beneficence are so unequivocally exhibited. Now these exhibitions of apparent selfishness, and rapacity, and cunning, and cruelty, in the inferior animals, are not moral evil; for the animals in which they appear are not moral agents; they are only obeying the instincts which have been given to them. But these instincts, although not moral evil, are yet images of moral evil. We cannot observe the stealthy, soft, silent creeping of the lion or cat tribe towards their prey, their furious spring, and the avidity with which they tear and devour their harmless and helpless victims; nor the similar cunning and artifices of the spider, its rush on its helpless prey, its venomous bite, the sucking of its blood, and the hanging up of its dead body near the mouth of its den; nor the sly, smooth gliding of the serpent tribe, and its sudden and deadly bite,—without having presented to our minds most striking images of the hatefulness of selfish rapacity, or wrong and violence and unfeeling cruelty, and without being moved with compassion for the helpless sufferers. In these movements of the inferior animals, there is, as we have said, no moral depravity; yet they are images of the hatefulness of moral depravity, kept continually before our eyes. And these lessons are not altogether lost upon us: for, on the one hand, there is a universal practice of comparing cunning, selfish, violent, cruel men, to such animals as the lion, the tiger, the fox, the wolf, the serpent, the shark—even the spider and the wasp. Nor, on the other hand, are those images of such virtues as gentleness, faithfulness to trust, obedience to masters, gratitude to benefactors, care of offspring, bravery in their defence, unwearied labour for their sustenance, all-sacrificing devotedness to the public weal, which are set before us in the instincts of such animals as the dove and many other birds, the lamb, the dog, the beaver, the ant, the bee, lost upon us, as is manifest from the admiration which these beautiful instincts excite, and from the readiness with which we contrast them with the opposite vices, which are prevalent among our own species.

It has been a favourite notion with some, that the Deity having imprinted certain powers or qualities, or, as they are sometimes called, laws, on matter, and having arranged masses of it in a certain order, leaves to these laws, or qualities, or principles, to maintain and develope the order of the universe. It would be laborious and irksome for us to be under the necessity of keeping any machine in order and in motion, by a constant muscular effort; and that notion of labour and irksomeness we are prone to ascribe to the Deity himself; and therefore for the purpose of relieving him, as they imagine, from such monotony and labour, they conceive of him as doing what we attempt to do, when we contrive machines that will perform their evolutions, and do their work, with as little attention and interference on our part as possible.

But, according to the views of these very philosophers, as they love to be called, we know of no such powers, or qualities, or laws in matter. We know of nothing but mere antecedents and consequents. We speak, for example, of the quality or law of the attraction of gravitation; by which we mean, that when two masses of matter are placed at a certain distance from one another, and left free, they approach one another with a force bearing a certain ratio to the quantity of matter in both of the masses, and to their distance from one another. But we know of no power in the masses of matter, or in the intervening space, to cause them to approach. We may as well ascribe the phenomenon to will and choice as to anything else. We call the phenomenon, attraction; but that is a mere word, which signifies nothing more than the fact of the approach of the masses to one another. We infer that there must be a cause, because we cannot conceive of any change, at least, in matter, without a cause; but that the cause is in the matter, or where, or what it is, we are absolutely ignorant. We talk of the laws of motion, but what it is that keeps a body in motion in a straight course, unless it be deflected from it by an external force, or what keeps a body at rest, when it is at rest, we know not: so also the laws of light, electricity, magnetism, crystallisation, and others; they are, even in the estimate of these philosophers, mere names of phenomena; that is, of antecedents and consequents. We are, therefore, ignorant, not merely of the laws of nature, but we know not that there are such laws. All that we know is, that certain antecedents are always, so far as we have observed, followed by certain consequents; or, rather, that similar antecedents are followed by similar consequents.

But we do know, by recognition, one efficient cause of the phenomena of the universe, and but one. We see in these phenomena similar evidences of design, and will, and power, that we see in the construction of a watch or a steam-engine. The design, and will, and power indicated in the structure of the watch or the steam-engine, we recognise as the same as that of which we are conscious when we arrange any portion of matter so as to produce an intended effect. We are, therefore, driven to the conclusion, that the power indicated by the evidences of design in the material universe, is the power of mind over matter; the power of that one designing, executing mind, which we have recognised as pervading the whole universe, so far as we have had opportunity of observing it.

Nor is there any conceivable cause that could account for the phenomena of creation, but the unceasing operation of an all-pervading, all-powerful will, conforming itself to certain laws,—a spirit or mind having perfect power over every molecule of matter in the universe, similar to that which we possess over those members of the body which are most under our control, but infinitely more perfect,—a power to move each molecule wherever it chooses, and to arrange them all as it sees fit; and that power regulated by the most perfect knowledge of all things that are, or have been, or that are possible. To borrow an illustration from Scripture: Moses was commanded by God to cast down a rod which he held in his hand, and it instantly became a serpent; he was then commanded to take it by the tail, and it instantly became a rod in his hand. A rod is somewhat similar in form to a serpent, and therefore we are very ready to imagine that it would be more easy to convert a rod than any irregular lump of matter into a serpent. But let it be considered what was to be done, in forming the serpent. The materials for the skeleton had to be drawn together and instantly arranged into the beautifully constructed vertebræ and ribs of the serpent tribe. The viscera, the whole alimentary system,—stomach, liver, bowels, had to be modelled and introduced in an instant; the respiratory and circulating systems—the heart, the arteries, the veins, the lungs, had to be formed; and simultaneously with all these, the nervous system—the head, the brain, with all the external organs of sense, the muscles, the skin, and the scales, must all be produced on the instant. Now, what power could effect all this but a mind having perfect power over every molecule of matter, to bring instantly every one to its proper place for producing the result? But we know, independently of Scripture, that animals have been created, at no very remote period; nor is there the slightest indication that any species of them has gradually advanced from a less perfect to a more perfect organisation. Whole tribes have, again and again, been annihilated, and others, of different genera and species, made to occupy their room. Acts of creation like that of the serpent of Moses must have taken place in innumerable instances. Now, what power is there in the universe to account for this fact, but the perfect power of that mind which we recognise by the evidences of design and of other mental attributes, in the universe of matter, over every particle of matter, to arrange all or any portion of them with infinitely more ease and rapidity than we possess to turn the pupil of our eye from one side of its socket to the other?

Even if the universe were a system of mere inorganic matter, moving with perfect uniformity, according to a certain order, or certain laws, as that order is sometimes called, we have no knowledge of any power that could frame and sustain these laws, but the power of an all-pervading mind. But that part of the universe which falls under our most exact observation, is not a mere system of inorganic matter, regulated by mechanical laws. It is full of life, full of disturbing causes to any mere material or mechanical system fulfilling its evolutions. Not only the will of man, but the instincts of innumerable animals implying will and intention, regulated, not by mere material impulse, but by thought and choice, would necessarily disturb the progress of any mere material or mechanical system. And that fact renders it infinitely more difficult to conceive how such a system could be kept in order, except by the constant presence of an all-pervading mind, carrying into effect its designs in every place and at every moment.

Some philosophers, as they would be deemed, have thrown out the supposition that the different grades of organic nature may have been occasioned by the efforts of the animals and the plants themselves. They fancy that only organic forms of the lowest order may have been created,—nay, that even these may, by some fortuitous process, have arisen out of inorganic matter; that the organism being once formed, it might aim at some attainment, which, in the course of generations, its progeny might at length reach; that a plant attempting to move might at length be furnished with fins or feet,—that an animal aspiring to fly might at length wish and strive itself into the possession of a pair of wings,—that frogs attempting to climb trees, as some of them actually do, might, in course of time, become monkeys; and thus—the transition seems not to be very great—from monkeys to become men.

But, in the first place, is there any evidence of plants or animals seeking to change their habits? Do snails ever indicate any desire to leap like frogs, or frogs to fly like birds? On the contrary, does not every species of animal seem to delight most in its own mode of life?—and does not every one manifest unequivocal indications of reluctance to vary its habits in the slightest degree? Many succeeding generations of cats have, under human control, been made to change their habits to a considerable extent. But no wild cat ever indicated a wish to become domesticated, or to adopt the more polished manners of the domestic cat: on the contrary, when the domestic cat is left to itself, its progeny indicate a disposition instantly to return to the natural habits of its kind.

But let it be supposed that there ever exists in any animal a wish or aim to change its mode of life, is there any evidence that such a wish or aim would have any effect in changing the organisation of the animal? Men have, ever since their introduction upon the earth, been turning the opening of their ears in the direction of sounds, that they may hear them more distinctly. Here is a wish, and an effort, that has been made by generation after generation from the remotest antiquity. Has this wish and effort added anything to the length of our ears, or imparted to us any power to move them in the direction of sound, as the horse, the ass, the dog, and many other animals do? This question can be answered for at least some three or four thousand years. Statues and pictures, nay, mummies, yet remain from those remote ages, which indicate that the ears of men then were precisely what they are now. It may be said, that four thousand years is a very short period in which to expect any perceptible change. But if we go a little further back, we find ourselves at one of those great geological revolutions, before which no trace of the existence of the human species is to be found.

These attempts to get rid of the real effective presence of God in his works, are more like the drivellings of insanity than the thinking and reasoning of rational men; and would be utterly unworthy of notice, but for the eager attention with which they are sometimes listened to. But God has not left his universe in circumstances which warrant us to entertain, even for a moment, the notion of its having been brought into its present state by the regular operation of any laws, or principles, or qualities impressed on matter or mind,—of his having once formed and arranged it in an imperfect state, and left it to develope the principles on which he constructed it. But he has constructed his universe, not only so as to evince his power and skill exerted in its first formation, and his special interposition from time to time, removing whole races of organised beings, and replacing them by others, but also so as to render it impossible for us to advance a single step towards understanding the nature and causes of the phenomena placed before us, but by the recognition of his constant, pervading presence and power and will, working in and through all.

THE recognition of the Deity in his works does not create any new emotions, but it excites, in a modified form, some of the emotions which are excited by the recognition of the minds, the characters, and acts of our fellow-men. His universal presence and infinite power and wisdom, are fitted to excite awe and veneration. His perfect power over us, and constant presence to us, are fitted to excite submission to his will, and obedience to his known commands. The tender concern manifested by Him for the well-being and happiness of his creatures, and the benefits which we daily receive from Him, and sources of delight which are daily opened to us, are fitted to inspire us with gratitude and love.

The intellectual operations dependent on the recognition of the Deity, consist chiefly of those operations by which that recognition is effected, and which have already been considered.

Other emotions and intellectual operations are excited by the special revelation which God has made of himself, of the relation in which we stand to him, and of his manner of dealing with us, and his ultimate purposes respecting us; but the consideration of these does not fall within the province of the present investigation.

END OF BOOK III.

BOOK IV.

ON THE MEANS WHICH THE MIND POSSESSES OF AFFECTING OTHER MINDS.

Having contemplated the mind in its capabilities of receiving influences from without by its sensations, by its perceptions of external material objects, and by its recognitions of the existence, and presence, and states of other minds, we have yet to consider what active power it possesses of affecting other minds. This opens a very wide field, in which we might expatiate to an almost unlimited extent. But we must restrain ourselves, and do little more than indicate the nature and vastness of it.

All the means that we possess of affecting the minds of others, may be resolved into two elements; namely, the first causing pleasant or painful sensations in them: the second, communicating our own thoughts and feelings to them.

The first of these elementary means of affecting other minds is seldom used alone. We seldom intentionally excite pleasant or painful sensations in others merely for the purpose of giving them pleasure or pain; at least, we seldom give pain merely for the sake of giving pain. The use of these means of affecting others is almost always connected with the expression of the state of our minds—our approbation, or love, or gratitude; or our disapprobation, our anger, our revenge, our contempt, our desires, our purposes; and is intended to strengthen the influence which we wish to exert on others by the expression of these various states of mind. A parent chastises his child; that is, he inflicts pain upon him, not for the mere sake of giving him pain, but for the purpose of strengthening the expression of his displeasure and his desires. One man inflicts a blow on another not because he wishes merely to give him pain, but to strengthen the expression of his anger or his hatred. This circumstance requires us, in arranging the means which we possess of affecting other minds, to depart a little from the more obvious method of considering these elementary means separately, and to divide the cases in which we seek to influence the minds of others into—I. Those cases in which the infliction of pain, or the communication of pleasure (especially the former), is used as an auxiliary to add power to the expression of the state of our minds: and, II. Those cases in which no attempt to excite pain or pleasure is used for that purpose.

CHAPTER I.

OF THOSE ATTEMPTS TO INFLUENCE THE MINDS OF OTHERS IN WHICH WE INTENTIONALLY GIVE THEM PAIN OR PLEASURE, FOR THE PURPOSE OF STRENGTHENING THE EXPRESSION OF OUR OWN STATES OF MIND.

1. In regard to the means of causing pleasure or pain, the first and most natural of these is the infliction of blows. A parent is able, by his greater strength of body, to chastise his child by striking him. By the exercise of the same muscular power, one man inflicts blows on another. This power may be increased by employing mechanical aids, as rods, staves, whips, sharp instruments; or by chemical aids, as fire applied to the person or property. This end may be effected also by inducing

others to inflict the pain; as when a ruler employs officers of justice for that purpose. Or pain may, in effect, be inflicted, by depriving of the means of enjoyment; as by the destruction or seizure of property, robbery of wives and children or of other near and dear friends or relatives, or by the confinement of the person. Pleasant sensations are communicated chiefly by bestowing the means of procuring them, or by relieving from pain.

2. In regard to the purposes for which pain is inflicted, or pleasure communicated, these are very various. Pain, as we have said, is inflicted to strengthen the expression of hatred, anger, envy, or revenge; and pleasure communicated to strengthen the expression of approbation, or of love, or of gratitude for benefits received.

Pains are inflicted by parents, and by rulers, on children for disobeying commands, or adult persons for transgressing the laws, for the purpose of deterring these children or adult persons from the repetition of their disobedience or transgression; and also of deterring others from similar disobedience and transgression. Rewards are seldom given for observance of the law; although sometimes they are given as bribes for violating it.

Sometimes pains are inflicted for the purpose of upholding or diffusing opinions or principles. This, it is obvious, they never can truly effect. They can only restrain the outward expression of opinions or principles, and thus indirectly hinder the diffusion of them. But that effect is usually counteracted by the curiosity that is excited to become acquainted with prohibited opinions and principles, and the pleasure which men feel in resisting any attempt to control them. Forbidden opinions or principles become much more attractive by being forbidden. All persecutions for the sake of religion, belong to this absurd use of the infliction of pains, for the purpose of strengthening the expression of the disapprobation of the rulers; and they have always undermined those religious tenets on behalf of which they have been resorted to. Opinions or principles can really be changed or maintained only by operating, not on the flesh and bones of people, but directly on their understanding.

The most monstrous and horrible use of pains inflicted for the purpose of influencing other minds, is warfare. The rulers of two nations quarrel, and forthwith they send armies and assault each other's subjects, burning, murdering, and devastating with the fury of demoniacs. This, doubtless, is for the purpose of ultimately reaching the rulers themselves, annoying them, impoverishing them, weakening their power, perhaps expelling them, or seizing them, or accomplishing their destruction. But what a fearful amount of human suffering is occasioned for the purpose of ultimately causing one or two individuals to suffer? And these individuals usually take care to preserve themselves from personal injury, often putting a stop to the carnage and devastation before it reach themselves, though not sooner, by procuring peace. Or where the quarrel is that not merely of the rulers of the nation, but of the nations themselves, the chief amount of suffering falls on the peaceful inhabitants, together with the women and children, who know nothing of the quarrel, and who care nothing about it.

3. The communication of pleasure, or the bestowing of the means of obtaining pleasant sensations, is effective in influencing the minds of others, chiefly when such measures are adopted for the purpose of manifesting good will to them and interest in their welfare. Anything given as a bribe, suggests the suspicion that it is given from interested motives,—not for the benefit of the receiver, but of the giver; and therefore, although it may purchase the outward acts of men, even contrary to their convictions of what is right, it can have no

permanent effect upon their minds such as the giver intended. But when pleasure is communicated, or the means of obtaining pleasure are bestowed, or pain is alleviated, as an expression of kindly feelings, it may remove prejudices, predispose the objects of such conciliatory measures to listen to those who use them, and thus open a way for information into minds that would otherwise have rejected it. Missionaries endeavouring to gain an entrance for Christianity among savage nations, always endeavour to introduce among them the comforts of civilised life. To this measure is frequently added with the happiest effects, medical advice and the administration of medicine. The relief of pain and deliverance from danger, has been often found effectual in arresting attention to the instructions and exhortations of the missionary, and in opening a way for the truth to the inner man.

CHAPTER II.

OF THOSE CASES IN WHICH WE SEEK TO INFLUENCE OTHERS, WITHOUT EMPLOYING THE AGENCY OF PAINFUL OR PLEASANT SENSATIONS.

The means employed in these cases are the communicating of our thoughts to others.

We have two modes of effecting this purpose,—namely, 1st, natural,—and, 2nd, artificial language.

1. In regard to natural language, certain effects are produced on our own bodies by certain mental emotions, or rather, He who formed our bodies, and who breathed into them the breath of life, who made body and soul, and instituted their connection with one another, has appointed certain movements of the muscles of the body, particularly of the face, to be the signs of various

mental emotions; so that when the mind is thus permitted to express itself, we can read the emotions of others in their countenances and their gestures, and others can of course read ours. We can thus express before others approbation, disapprobation, satisfaction, anger, joy, grief, fear, hope, love, hatred; and we can thus excite sympathy with our emotions in other minds, or awaken in them those emotions which our emotions towards them are fitted to awaken. Thus the expression of anger may excite anger in others by sympathy; or it may excite anger in them from resentment; or it may excite fear or grief in them, because they have displeased us, and exposed themselves to injury from us; or it may excite satisfaction in them to see us angry with others. And so with regard to other emotions.

2. But the chief and most varied means which we possess of influencing others by simply communicating our thoughts to them, are the various uses of artificial language. Certain sounds are, as we have seen, associated in our minds, and in the minds of others who speak the same language, with certain sensations, perceptions, recognitions, reasonings, emotions, and, in short, with all mental states and operations, so that in proportion to the compass and expressiveness of the language that we use, we can convey conceptions more or less vivid, of the various states and operations of our own mind; as the information that we possess, the inferences that we draw from it, our reasonings, our emotions, and the causes of them; and thus we possess a most powerful implement for acting on the minds of others.

The use of this implement is greatly extended by the invention of written language and of printing. By associating with the sounds used in our language certain visible or tangible forms, we obtain the power of conveying our thoughts to distant places, or of placing them on record for the producing of effects on minds that are not to appear on the world's stage till we shall have been removed from it for ever. The thoughts of men who lived several thousands of years ago are thus yet living, and active in producing important effects on individuals and on society.

When natural and artificial language are used in conjunction, that is, when the communication of the thoughts by speech is accompanied with those tones of voice, those modifications of the countenance, and those gestures, which are the natural expressions of the emotions conveyed by the sounds of the artificial language, or when the words are so selected in written language as to convey the emotions of the mind, then the influence on other minds is at its maximum.

The chief, the most important, and the most permanent effect of one mind on another, is produced by the communication of facts. Facts always interest, when they are first communicated and understood, by their novelty. Many facts are fitted to suggest new views of familiar objects, and lead to new trains of thought; many to excite emotions of various kinds; many to stimulate to action and to regulate the conduct.

False statements, communicated as facts, produce the same effects as if they were facts, so long as they are believed. When they are discovered to be false, they instantly lose their power over the mind, and the deception that has been practised upon it, renders it more cautious in believing statements, so as often to lead to the rejection of those that are true and important.

Next to statements of fact, inferences from facts and reasonings upon them are most influential. But inferences and reasonings, unless strictly demonstrative, being more liable to fallacy and less easily understood than statements of fact, proportionally less confidence is placed upon them.

When the statements of fact, or *quasi* fact, or the inferences from them, are accompanied with the expression of such emotions as the statements, if believed, would naturally excite, the influence of them is greatly augmented, because the reality of them is more vividly presented to the mind. It is thus that the fictitious statements of the theatre produce their effect. The statements are made, accompanied with the expression of those emotions which, if they were true and were believed, they would naturally excite. The audience is thus, for a moment, made to believe them, and to sympathise strongly with the persons who are affected by them.

The principles on which facts, or *quasi* facts, may be stated, inferences drawn from them, reasonings built upon them, so as to produce the most powerful effects on the hearers or readers of the statements, are treated of in the arts of grammar, logic, rhetoric, poetry, and elocution; and to treatises on these arts we must refer the reader.

THE construction of the Holy Scriptures furnishes a marvellous and beautiful example of the most effective use of the power of influencing the minds of men simply by the communication of thought. The Scriptures were written by men, not, as in Mahomet's Koran, personating the Deity in what they wrote, but by men—under the guidance of God, indeed, but stating truths which they believed, and expressing emotions which they felt.

These writings consist mainly of two distinct series of facts;—the *first* consisting of a narrative of historical facts, capable of being proved or disproved by the ordinary means by which historical statements are ascertained to be true or false; the *second* consisting of facts of a spiritual nature, referring to the existence, attributes, and works of God, the spiritual part of our nature, the relation in which we stand to God, the mission of the Son of God to save us from sin and its consequences, and of the destiny of the soul and body after death. These two series of facts are so connected, that, if the historical statements be true, the spiritual statements must be true also; whereas, if the historical statements could be proved to be false, the spiritual statements are abandoned by the writers themselves of Scripture. See especially the unequivocal admission of the Apostle Paul, that if Christ did not rise from the dead, faith is vain, preaching is vain, and Christianity itself is untenable. (1 Cor. xv.) For a fuller elucidation of this construction of the Bible, the author must refer his readers to his "Letters on the Divine Origin and Authority of the Holy Scriptures."

This method of influencing the minds of men by statements of fact is in perfect accordance with the nature of the mind, which is universally affected and moved by what it believes to be true. The occupying of the intellect by facts necessarily influences the emotions and the will in accordance with the nature of the facts believed.

The spiritual facts, the communication and confirmation of which is the great end of the whole compilation, are of a nature deeply to affect all men; and cannot but arouse, and interest, and beneficially affect all who are made acquainted with them, and who really understand and believe them. Their object is to bring men to the acknowledgment and worship of the one living and true God, Creator of heaven and earth, to the obedience of his law, and consequently to a just and kind and charitable deportment towards one another.

The historical facts are fitted to arrest the attention, to fill the soul with wonder, sometimes with perplexity, more frequently with admiration, and to be a vehicle for conveying the spiritual facts which it is the end of Scripture to inculcate. The various characters delineated—and delineated with great truth and power—and the circumstances in which they are placed, are full of interest, and are fitted to call forth every emotion of which the soul is capable, and to awaken all its sympathies. Especially the character of the Lord Jesus Christ, so fully and vividly presented to us in the four narratives of his acts, which form the principal part of the history of the New Testament, is the noblest and most effective object for strongly and beneficially influencing the whole man, enlightening his understanding, directing aright his affections and his conduct, that has ever been offered to the contemplation of our race.

The spiritual facts, to which the historical facts stand related merely as evidence, and as the medium of conveyance, are of infinitely higher, even overwhelming interest. The being, the attributes, the constant presence of the Deity, his law, his hatred of sin, his love of holiness, the rewards and penalties by which his law is sustained, our own spiritual nature, our immortality, our violation of the law and exposure to its denunciations, the cause and the certainty of death, the glory and honour and immortality, or the indescribable ruin and horror, into which we enter at death, the mission of the Son of God to save us, the mode and terms of salvation, and the critical and urgent importance of our present state, as the portal to eternity — these, and similar facts, are manifestly calculated to arrest the attention and to awaken every faculty of the souls of those who believe them into most vigorous exercise.

Then, these statements of fact are communicated in forms the best fitted for drawing attention to them, and persuading men to receive them. They are not conveyed in the form of logical systems of doctrine, like our common systems of theology; but they are presented, sometimes in the form of most affecting narratives, related with the most charming simplicity, sometimes in impassioned addresses, in warnings of danger, remonstrances, denunciations, encouragements in depression, consolations under affliction; sometimes in the confidential communications of private friendship,—letters, conversations, in which the words breathe tenderness and affection; sometimes they are set forth, arrayed in the charms of fervid, most ornate, and yet most unaffected poetry; and sometimes they occur in earnest and fervent prayer, in which the whole soul of the writer is manifestly poured forth into the bosom of his Father and his God.

Finally, the Scripture directs that these facts be communicated to others by those who believe them, as they may have opportunity, that the whole code of religion embodied in them may have the advantage of the living voice of men who are under its influence, who have experienced its solemnising, elevating, purifying, comforting effects, with all the natural expressions of awe and reverence, of alarm for those who are in danger, sorrow for those who are ruining themselves, and joy over those who are walking in safety, which the various parts of it are fitted to awaken.

It is impossible to conceive of any means more perfectly adapted to operate powerfully and beneficially on the human mind than those which are provided in the Holy Scriptures.

Of those two implements which we possess of influencing the minds of others, the most powerful beyond comparison is the communication of thought,—using our bodily organs simply as means of conveying our thoughts. Yet that implement, which consists of inflicting pain, or communicating pleasure for the purpose of constraining or bribing the will, independently of the convincing of the understanding, being the most rapid in its effects, and appearing to superficial observers to be the most decisive, is almost universally resorted to by those who have power to wield it. It is necessary that children, before their minds are open to receive information, or to understand reasoning, should be coerced by direct appeals to their susceptibility of painful or pleasant sensations; and a rod for compulsion, or sweetmeats for a bribe, may, with very little children, be perhaps beneficially employed. Yet even in the management of children, such appeals to force or to bribery may be, and ought to be, superseded, at a very early age, by judicious treatment in cultivating the understanding, and gently but firmly checking any waywardness of disposition. But the recklessness with which appeals to force or to bribery, especially to the former, have been made in all ages down to the present moment, and in all countries, even those most advanced in civilisation, indicates how slow is the progress of our race in the knowledge of our own nature; or rather how pertinaciously we adhere to the most absurd and barbarous practices which gratify our passions.

Two men quarrel. They are at variance in their statements. The one says that the other lies. The other, instead of taking measures to disprove the allegation, and so correct the mistake of his opponent, strikes him. Then the passion of revenge is roused, and the blow is returned. Perhaps recourse is had to deadly weapons, and grievous injury, even death itself, is inflicted on one, or it may be both of the parties; while the question of the truth or falsehood of the accusation, or of the original statement, remains untouched.

The two men who quarrel perhaps have friends and dependents, whom they engage in the quarrel. A feud commences; men assail each other with murderous aim, houses are burned, wives and children are slaughtered, a whole territory is laid waste and filled with desolation, amidst scenes of unspeakable horror and anguish.

The rulers of two nations disagree. The king of one offers some slight or indignity to the emperor of another. Each has money and soldiers at his disposal. Thousands of men, provided with implements of destruction, are sent into each other's territory, and the unoffending inhabitants, who knew nothing of the quarrel, are assailed with fire and bloodshed, their villages plundered and burned, their towns taken and sacked, and men, women, and children involved in indiscriminate slaughter.

One great nation, or rather the rulers of a great nation, become jealous of the rulers of a neighbouring nation, fearing that they may obtain so much power as to render their neighbourhood dangerous. Instead of seeking directly to influence the minds of the nation that they dread, or its rulers, or to persuade the surrounding nations to discountenance a spirit of aggrandisement in it, or even bringing them to an agreement to aid one another, should any attempt be made to encroach upon them, or otherwise to injure them by brute force, it engages in active warfare, and endeavours to persuade others to take part with it in the warfare. And merely in order to bring a few individuals, the rulers of a neighbouring nation, to a better mind, armies are levied, including in them the most debased and unprincipled ruffians that the nation can produce, and marched into peaceful districts to lay them waste with fire and sword. These injuries arouse the spirit of a people, who would else have been glad to continue in the quiet prosecution of their ordinary avocations; retaliations commence; and, in the reckless, ferocious conflict, thousands of peaceful people, aged men, helpless children, timid and delicate females, are driven from their homes, plundered, insulted, and ruthlessly massacred.

Nay, a nation priding itself on having arrived at the very acmé of civilisation and humanity, finds its commerce with some foreign country impeded by the internal regulations of that country. The regulations are, perhaps, disliked by the people, who would gladly avail themselves of the opportunity of making gain by the commerce prohibited by their rulers. The humane and civilised nation, not being able, or perhaps never attempting, to persuade the rulers of the foreign nation to permit the people to trade with one another, sends out armaments, avails itself of the improved machinery for destruction which its advanced civilisation places at its disposal, attacks the people who would willingly trade with them, because it cannot get at their rulers, burns their houses and ships, murders their wives and children, and then glories in having thus forced the rulers of a nation, at the other side of the globe, to withdraw those commercial restrictions which they deemed necessary, and perhaps truly deemed necessary, for securing the well-being of their subjects.

The laws of war—for war has a sort of code of laws of its own—strikingly expose the horrible nature of its operations. In the first place, when an army is in the field, that it may be absolutely under the control of its head or general, the slightest disobedience of orders, however unreasonable those orders may be, whatever suffering or danger the execution of them may imply, however revolting to humanity, however absurd, may subject the person who commits it to instant death. A general having thus at his absolute command a body of men, it may be to the amount of hundreds of thousands, furnished with every implement which the ingenuity of man has invented, during the world's history, for the destruction of life and property, (we say every implement, for if some have fallen into disuse, it has only been because others more potent for destruction have been substituted for them,) is left by the laws of war to his own uncontrolled discretion, in regard to the use that he makes of that enormous power of destruction. He may, for example, if the success of his enterprise requires, lay whole districts of country waste. He may send bands of the greatest ruffians in his army to burn towns and villages, to destroy or carry off property, to trample down, or burn, or carry off the standing corn, and to drive the people before them like sheep to the slaughter. And these things not only may be done, but have been done in all ages of the world, down to the present, by men whose names are recorded in history, with the epithets *great* or *illustrious* attached to them. It is considered not only within the power of a general, but is the usual procedure, if a town be taken by storm, not only to massacre the garrison, but to give up the town itself and all its inhabitants, young and old, male and female, to the uncontrolled will of a rabid, infuriated soldiery. It has recently been ruled by that nation which values itself on conducting warfare on the most honourable principles, that if a body of people hide themselves with their wives and children in caves, it is agreeable to the laws of war to fill up the mouths of the caves with combustibles, set fire to them, and suffocate or roast alive their wretched victims. It is further considered perfectly legitimate in warfare to lure men to their destruction by every species of deceit, even to the extent of inventing and propagating the grossest falsehoods.

We have thus exhibited this mode of influencing the minds of men in its most vigorous exercise, and have displayed the apparently irresistible energy that it possesses, that we may not be supposed to underrate it, when we assert that it is powerless when compared with the other implement, namely, the simple communication of thought, without appeal to the infliction of pain or the communication of pleasure.

The world, it has been said, is governed by opinion, which amounts to this, that the conduct of men is regulated by what they believe to be true. Were it regulated by what is really true—by the knowledge of the whole of the truth calculated to influence them in every case, there were an end at once of all confusion, and crime, and misery. Then the world would be under the guidance of God, not merely *de jure*, but *de facto*, for the light of truth is the sceptre of his kingdom. As it is, the conduct of men is directed by what they believe to be true, and the cause of all the disorder and crime of the world is, that men are ignorant of the truth that ought to influence them, and have been induced to believe and act upon falsehood as if it were truth. Hence it is obvious, that the only really effective and permanent means of influencing others is occupying their minds with truth, or *quasi* truth. So far as their minds are occupied with truth, their conduct will be beneficially influenced. The power of the most despotic monarch on the earth rests on the opinion of his subjects, that it is their duty or their interest to obey him. Change that opinion, and his power crumbles to nothing; his people resist him, his armies forsake him; he is shorn of his locks, and has become weak as other men. The ancient monarchies were reared up by the power of arms; but whence did that power proceed, but from the opinion of their subjects, that they were bound to obey their sovereigns in fighting under their command; or, in the opinion of men, that it was honourable to be soldiers; that it was glorious and patriotic to subdue other nations, and to bring them into subjection to their own; or that, by obeying their military chiefs, they would most readily and certainly obtain the gratification of their rapacity, their lust, and their pride.

It required some seven centuries of almost constant warfare to build up the Roman empire by the power of the sword; that is, by the infliction of pain, to compel other people to submit to the citizens of Rome. Little more than two centuries of the use of the other weapon, —the communication of thought, were sufficient to subdue it; and that not merely as Alexander subdued the Persian empire, leaving the people just as he found them, with only a change of rulers, the mind of Alexander himself being more subdued to the Persians than they were to him; but to subdue it effectually, not only obtaining possession of its throne, and its seats of authority, but of its people, changing their religion, their laws, their habits, their institutions, their whole social condition. This great and effective revolution commenced in the preaching of an obscure individual, in an obscure province of the empire,—an individual who was scouted and persecuted by the rulers and the learned men of his own nation, and crucified under an order of the Roman governor. Yet that individual, by means of officers appointed by himself, and acting strictly according to his directions, solely by the communication of thought, was, in little more than two centuries, acknowledged as the Lord and Master of the empire; his laws received and obeyed, and institutions established, and almost universally observed, in commemoration and honour of him.

After this, the bishop of Rome raised an empire, as despotic as the pagan Roman Empire was, solely upon the power of opinion. The only soldiers employed were clergymen, secular and regular, and they did the work of soldiers, even in the exacting of money, dictating laws, bringing emperors and kings to the most abject submission to their leader, more effectively than these purposes had ever been accomplished by the old Roman legions.

The opinions, or *quasi* truths, on which the clergy of Rome founded the despotism of their chief, were, to a great extent, false. When assaults were made upon them, and attempts made to change the opinions of the people, they were conscious that their dogmas could not bear examination; and being resolved to maintain them, abandoned the implement by which they had been established in the belief of the people, and betook themselves to the weaker implement of fire and sword to maintain them. They prohibited all free inquiry, denounced all books containing statements which they regarded as dangerous to their power, visited with the heaviest penalties, not only all who wrote such books, but all who read or possessed them. The Holy Scriptures were especially proscribed, and most jealously withheld from the people. Crusades were proclaimed by the bishop of Rome against obscure tribes, who, in their seclusions among the valleys of the Alps, denied his authority. An institution of terrible power, and most unscrupulous practice — seizing, imprisoning in dungeons, torturing, and subjecting to the most horrible deaths, all who exposed themselves to its fell and jealous suspicion—was erected. But all in vain. These severities, as those which were inflicted by the pagan rulers of the same city, only excited the more the curiosity of the people to listen to the proscribed statements, and predisposed them to believe that they were true. Every execution spread the report of the tenets hostile to the church of Rome more widely. The crusades against the Vaudois scattered them all over Europe, carrying their tenets along with them, till, when the nations were sufficiently leavened with the persuasion that the clergy were deceiving them, the reformation openly broke out, and a death-blow was inflicted on the power of the Roman bishop, under which he is even now reeling and staggering.

Unhappily those who embraced the reformed doctrines, and who, under the influence of them, abjured all subjection to the bishop of Rome and his clergy, instead of persevering in the use of that implement by which all their influence had been gained, and on which solely the maintaining and extending of that influence depended, as the Christians of the two first centuries of Christianity had done, bearing persecution patiently, and when persecuted in one city, fleeing to another, carrying their light with them, in an evil hour betook themselves to the same inferior weapon with their adversaries, and endeavoured to defend and maintain their tenets by force of arms. The consequence was, that wherever the adherents of the church of Rome greatly preponderated, they crushed the Reformation, and destroyed the reformers, or expelled them from their territory. The appeal to arms also being more exciting than the appeal to truth, diverted the attention of both parties from the truth, excited violent prejudices against one another, disqualified both from holding such quiet and friendly conferences as were necessary to the diffusion of truth among them. The result has been, that since the appeal to arms was made, the progress of the Reformation has been arrested even in those countries where Protestants possessed the chief power. They have scarcely gained an inch of ground, while in some places they have lost ground. They have imitated the church of Rome in making laws against dogmas, which they wished to eradicate from the minds of the people. But laws are not an appeal to truth, but to force ; and, therefore, their tendency is to withdraw the attention of both parties from the only means by which they might both come to the knowledge of the truth; namely, calm, unprejudiced inquiry and discussion.

The history of the great Revolution in France, at the close of the last century, and the various struggles which have succeeded it, furnish most important and pregnant illustrations of the imbecility of mere physical force when brought into opposition with the vigorous communication of thought. Louis XIV. and the Roman Catholic clergy succeeded in expelling the sacred Scriptures from France, or at least having them shut up in holes and corners, so that the people generally had no access to them. Religion thus had no basis to rest on, but the authority of the prince, and the unsupported assertions of the clergy. The Reformation had introduced a taste for inquiry and speculation, and had accustomed the more educated of the people to view the clerical system, without that sort of awe which would have prevented them from seeing and believing its worldly, rapacious, and tyrannical character. Knowing nothing of religion but what they heard from the clergy, or saw in them, they soon became persuaded that it was a mere trick to obtain money and power. These speculations passed from religion to politics, and they soon saw that the Divine right, by which their kings claimed to govern their subjects as they saw fit, was merely another and kindred trick to obtain money and power; and that these two deceptions—the ecclesiastical and political—were employed to uphold one another. These opinions having gained possession of a large proportion of the French people, they began to manifest discontent with their condition, as slaves to their civil and ecclesiastical rulers. The sovereign and clergy attempted to meet this discontent by physical force; but that only provoked retaliation, and the balance of physical force being now against the monarch and clergy, both were hurled from their seats with terrific violence.

Other nations, whose rulers and clergy were afraid of the contagion of similar opinions, interfered. Particularly Britain became prominent in the interference; not, however, with a kind and conciliatory diffusion of truths and principles, calculated to inform and beneficially to influence the French people; but, by warfare, and the usual operations of that accursed art—shooting, stabbing, burning, and plundering. This measure roused the spirit of the whole French nation to resist the aggression. They too flew to arms, and soon proved themselves to be as expert in shooting and stabbing as their invaders, and very quickly expelled them. But the appeal to arms furnished a favourable opportunity for a military adventurer of extraordinary powers of mind to obtain their admiration by leading them to victory, and to persuade them that the interest and honour of France required them to invade, and plunder, and massacre the people of other countries. This they were taught to call glory; and the glory thus obtained was indicated to them by giving them medals to be hung by ribands from their breasts; by the permission to put feathers in their hats; by presenting them with painted sticks, called batons, to be held in their hands; and all the other gewgawery which is employed in all nations, the most savage as well as the most civilised, to mark the men who have most distinguished themselves in these fell struggles for the precious life. Bonaparte having thus gradually obtained the direction of the whole physical force of France, employed it in gratifying the vanity of the nation, pampering the pride and cupidity of the army, and extending his own power; and thus, for a time, succeeded in diverting the minds of the people from those political speculations which were the original cause of the Revolution.

In the meanwhile, not one inch of ground was gained in bringing the minds of the people into a safe and satisfactory state. Infidelity was as prevalent as ever; and political speculations, although suspended for a time, had not led to the establishing of any sound or permanent principles.

At length Bonaparte overstrained his power, and the bubble burst. He was dethroned, and the Bourbons restored. Had they embraced this favourable opportunity of introducing information among the people, and ruling them on just principles, France, wearied and worn out by its exhausting wars, and sighing for repose, might have become the centre of light and peace to Europe; but the monarch and the clergy, untaught by past experience, began again to resort to physical force, the one to establish his despotical authority, the other their spiritual influence; neither of which would bear examination. The people were again roused to resistance, and drove the monarch a second time from his throne, and forced the clergy to skulk into hiding-places to avoid the storm of popular indignation that menaced them; and another prince of the same family, who was supposed to be imbued with the spirit and principles of liberty, was chosen to succeed him. But he and the clergy soon began their old artifices, sustained by the old weapon, physical force. Mere opinion again prevailed, he was driven from the throne, and a republic established, with an elected president.

Still nothing has been done to direct aright the minds of the people, by furnishing them with genuine information. Still wilder and more ruinous speculations, political and social, have been gaining ground, and spreading over the whole of Europe. A premature outburst has been, to some extent, quelled; but the rulers, still unconvinced of the imbecility of physical force, when brought into collision with the progress of opinion, stand with arms in their hands, as if to fell to the ground the spiritual unearthly power which they dread, wherever it may show itself; and many persons, who desire to preserve their property and their lives, are betaking themselves to the clergy and the ceremonies of the church of Rome, as the only bulwarks of social order. This they mistake for a reaction in favour of monarchical and clerical despotism, while it is nothing more than the rallying of persons who possess property round the chief abettors of physical force, to protect them from the dreaded results of those speculations which they know to be fermenting among the people. To aid this imaginary reaction, or rather to obtain a despotism for himself, upheld by physical force, the president of the French republic is endeavouring to gain the army by giving them sweetmeats; and some of the soldiers, to express their approbation of this new but pleasant accompaniment to a review, are shouting "*Vive Napoleon*," and even "*Vive l'Empereur*."

Meanwhile the malcontents are driven back, fortunately for themselves, upon the very source of their strength, and the employment of that weapon by which they have advanced from their prostrate condition to their present dreaded, and really formidable power, the communicating of their thoughts, and the diffusion of their principles. The effect of this weapon will doubtless be greatly aided by the revolting executions and massacres in the perpetration of which the soldiers have been employed, which will predispose multitudes of humane persons, and the soldiers themselves, to take part with the victims of these cruelties. The only remedy for this frightful disorder in the body politic of Europe, is the free circulation of truth of every kind, which will correct the wild extravagant speculations of the people, and prevent them from proceeding to open force, and give time for a settlement of the relations of the rulers and the subjects on principles of justice and mutual benefit. But the attempt on the part of the rulers and clergy to keep down speculation by force of arms will only increase the zest for it, till the people find themselves sufficiently powerful to break their bonds, and then may come collisions and catastrophes more terrible than any that have yet been witnessed. Nothing can long save those rulers whose power has no better support than brute or rather savage force, or those clergy who are attempting to recover their influence by means of winking and weeping dolls and pictures, from the indignation and contempt of a befooled and insulted people.

One principal cause of these perpetually recurring convulsions in all states, lies in a practice which is still followed even among the most enlightened nations of the world, namely that of sustaining the authority of the law exclusively by the threatening of pains and penalties for the violation of it. We by no means insinuate that all appeals to force should be withdrawn. There are always to be found persons whom no other motive than the dread of punishment will restrain from the violation of the law, even as there are often in the best regulated families, children whose wilfulness and violent tempers must be kept under control by an appeal to the rod. But an appeal to force ought to be kept out of sight as much as possible, and ought to be the very last appeal, instead of being, as it usually is, the first.

The first thing necessary towards a stable support of any law is, that the people understand it, and understand the necessity of it, and the benefit which they derive from it. For providing this support of the law, legislators, we conceive, ought to see that the people receive such education as will enable them to understand those laws which are applicable to them, and to which they are expected to conform themselves. They do not, we conceive, fulfil their duty, by leaving the education of the people to the private speculation of teachers, nor to education societies, nor to churches. Private teachers and societies for education may or may not give the people such instruction as would enable them to understand the laws which they are expected to obey. Churches are bound to see that those who adhere to them are educated for the purpose of making them acquainted with that higher law which it is their duty to explain and uphold. But legislators are bound to see that the people have the means of knowing and understanding their enactments, and the reasons for them; and ought not to found the authority of the law on mere force of arms. Nothing surely can be more revolting than the aspect in which legislators present their enactments. "We ordain so and so, and so; whosoever shall disobey our command, shall be subjected to such and such penalties, and all judges, magistrates, &c., are hereby ordered to see these penalties inflicted on the violators of this our decree." This law comes forth upon a people who perhaps are incapable of understanding the nature and purposes of it. No pains have been taken to have their minds in such a state of intellectual training as might enable them to understand the necessity of the law, or any benefit that they can derive from it, so as to gain their hearty assent and countenance to it. The sole appeal being to force, tends to beget in their minds suspicions that the law is not for their benefit, but for the interest of the legislators themselves, at their expense; and unhappily, legislators have often given their people too good ground for such suspicions. And so a disposition is generated in them to evade the law, or to trample it under foot if they dare. We do not say that laws should be unsupported by the threatenings of pains and penalties on the violators of them. But the chief reliance of legislators for obtaining obedience to their laws, should be the justice and beneficial tendency of their enactments, and the intelligence of the people to discern these attributes of the law, and the good dispositions of the people, to maintain the peace and good order of their community. And the pains and penalties should be rather kept in reserve in case of necessity, than paraded in front and rear of the law, as the only ground on which it is expected to be obeyed.

One great advantage of the introduction of juries drawn from the mass of the nation into the execution of the law is, that it tends to make the people generally acquainted with the law, and with the reasons for its requirements. Barristers are thereby obliged to make their pleadings intelligible to juries, that is to the mass of the population. Judges are laid under the same necessity in their charges and explanations of the law. The necessity goes back to the legislature, which must render its laws capable of being explained by judges and barristers, and of being understood by the people. And all that is further wanting, is the bringing up the minds of the people to such intellectual culture, as shall enable them to understand the charges of the judges, and the pleadings of the barristers.

In the criminal law, the advantage of juries is shared alike by England and Scotland; but we conceive that England has a high advantage over Scotland in the administration of the civil law not criminal, by the introduction of juries into its law courts, to pronounce upon the merits of the question brought under litigation. In Scotland, no civil case is decided by a jury. Juries have of late years been introduced to ascertain certain points in connection with civil suits, analogous to those points which are referred to Masters in Chancery, in England, by the Lord Chancellor. But they are never permitted to pronounce upon the merits of the whole case under litigation; that being left for the decision of the Lords of Session, as judges. The immediate result of this arrangement is, that the pleadings of the advocates being addressed exclusively to the judges, are couched in technical language, utterly unintelligible to the public; and the decisions of the judges are given forth in a style more like the response of a pagan oracle than the declaration addressed, as it ought to be, to the whole nation, of a law in which all are interested. They are couched in a language which is neither Scotch, nor English, nor Latin, but a barbarous mixture of all three, intelligible to no class of human beings under the whole heaven, but the legal corporation of Scotland. The next result is, that while the educated people of England are well acquainted with the general principles of English law, and value them, and evince deep interest in the decisions of their judges, the educated people of Scotland know little or nothing of their law, and have no further interest in it than so far as it regulates their own private concerns. The judges of England are prominent public functionaries, nearly allied to the highest statesmen of the realm, whose names and characters are familiar to all educated Englishmen. The Scotch judges are seldom heard of, and seem to possess little distinction of character beyond the limited circle of the profession. Some, indeed, have proved themselves to be able men by their extra-official writings, and by their popular pleadings as barristers in criminal cases; but have instantly, on their elevation to the bench, sunk into obscurity. It is in vain that we look for such names as Hale, Mansfield, or Kenyon, in the history of Scotland. So utterly devoid of general interest has Scottish law become, that scarcely a passing notice of it is to be found in the popular cyclopædias of the day.

A much greater evil, however, arises out of its being shut up within the legal profession, than its being deprived of all public interest, namely, its uncertainty, and liability to abuse. The tendency of the decisions of the English judges is to merge minute distinctions, and to bring the law under broad principles, intelligible to the whole kingdom. This tendency is indicated by Blackstone in his expression, "The law loves uniformity."* The tendency of the decisions of the Scotch judges is to give weight to minute distinctions, so as to render the whole law unintelligible to the people. Attorneys, or writers, as they are called in Scotland, and lawyers of great practice, are accustomed to say that they never can conjecture how a case will be decided, however clear it may appear to them; because they never can foresee what insignificant point may be swelled into importance, when it comes before the judges. An incident is said to have occurred in the law courts of Edinburgh, of such a nature that if it had occurred in England, it would have been felt to the extremity of the kingdom. When causes are brought before the chief court, called the Court of Session, in Edinburgh, they are, in the first instance, heard and decided upon by one of the judges sitting as lord in ordinary, as the phrase is, from whose decision there is an appeal to the inner house, where a certain portion of the whole bench sit in judgment upon it, and from whose decision there lies no appeal, but to the House of Lords. One of these lords in ordinary, after hearing a cause, is said to have addressed the advocate for one of the parties to the effect, that he was sorry that their case was so plainly and palpably right in law, that he must decide in their favour, for he knew that his decision would be reversed in the inner house. This astounding charge, brought against the integrity of the supreme court of law in Scotland by one of the judges of that court, sitting and acting in his official capacity, passed in Edinburgh for a mere sarcastic joke, and was scarcely heard of beyond the legal circle.

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* Comment., Book II., Chap. iii.

Nor is this uncertainty the worst effect of the administration of the law being confined to the legal corporation. It is rendered by that means liable to abuse, and to be converted into an instrument of injustice and oppression. Their decision in the case of the Church of Scotland, by which 400 ministers were forced to resign their livings, or to do violence to their consciences, was one in which the Crown, the aristocracy, and the courts of law had a direct interest, as against the liberty which the Church claimed, not on its own behalf, but in behalf of the people of Scotland;* and the ministers and people of the Free Church have the testimony not only of many of the ablest lawyers in the kingdom, but of a considerable portion of the very judges of the Court of Session itself, that the decision was in direct opposition to the principles of the law, and to the practice of the court for two centuries. And, when that court sent out its nominees to ordain men to the sacred ministry, on its

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* From the technical manner in which the law courts of Scotland give forth their dicta, the English public could never be made to understand that the object which the majority of the Scottish clergy sought was not the power of their own courts, but the power of the people to reject such presentees of patrons as they disapproved of. The whole subject under litigation was so mystified by legal technicalities, that tories, whigs, and radicals were alike unanimous in trampling underfoot the rights not of the clergy, but of the Scottish people. The liberties of the clergy did not come into question till an advanced state of the conflict, when the law courts assumed authority over the church courts, which never had before been claimed; and attempted, by threatening the ministers with pains and penalties, to force them to ordain presentees whom the people had rejected; and that, for the purpose of giving to these presentees a legal right to the emoluments of the ministry. The church courts had nothing to do with the emoluments of ministers, nor did they for a moment dispute the right of the law courts to dispose of these emoluments as they might see good; and if the law courts, being dissatisfied with the church courts, had kept the emoluments in abeyance, or had obtained liberty from parliament to bestow them on the patron's presentees without ordi-

nation, there would have been no disruption. But conscientious ministers could not permit a sacred ordinance to be degraded to the rank of a mere legal ceremony, to implement a right to an income and the occupation of a house. It was this degradation of the worship and service of God that roused the spirit of so large a portion of the ministers and people of Scotland, and determined them rather to forego the benefits of a state provision for their church than to permit themselves to be implicated in so scandalous a profanation.

We deplore the disruption, except on account of the immediate good that it has produced. The excellency of the ecclesiastical system of Scotland was manifested in the disruption itself. It was in the Established Church of Scotland that those high and noble principles were fostered, which impelled so large a body of ministers to part with all their worldly property, and to cast themselves on the providence of God and on the Christian character of their people for a provision for themselves and their families. We dread the voluntary system into which they have been thrown, chiefly because it gives too much prominence and importance to the money element in their deliberations, which we fear will tend to lower the spiritual tone both of ministers and people, especially the latter. Questions of money never came before the courts of the Established Church of Scotland. The funds of the church were under the absolute control of the law courts, and that control the church never complained of, nor disputed. The ministers were frugally supported from a fund that belonged to no one; and therefore by their support no one was injured. The advocates of the voluntary system often take credit to that system for the splendid liberality manifested by the members of the Free Church. It is true the money was contributed on the voluntary system; but the zeal and devotedness to God which called forth the contributions, were fostered under the system of the Established Church of Scotland. Again we say that we deplore the disruption, and would rejoice in any prospect of the breach being healed, by the legislature manifesting a disposition to guarantee to the church, not its emoluments, but its liberty of spiritual action. All that the church courts ever demanded of the law courts, was, "let us ordain whom we will, or abstain from ordaining whom we will, under the direction of the Word of God; and do you dispense or withhold the emoluments of the church as you will, under the direction of the law of the land."

own authority, for the purpose of making good a legal right to the occupation of a house, and to a certain income, they were resorting to a measure that never before had been resorted to, as was manifest from the reasons given by those judges who voted for it, and what, most certainly, was in opposition to their own standard books of law, and to the prelections of the professors of Scotch law.* Our conviction is, that were it not for the union of Scotland with England, the liberties of Scotland depending, so far as civil rights are concerned, on a court constituted as the Court of Session is, would be worth very little; and the wisest course the people of Scotland could take to secure their liberties, would be either to get the whole law of England extended to Scotland, or, at least, the popular English mode of administering their own law.

The English reader will understand better the difference between the English and Scotch modes of procedure in law courts, when we say that the administration of the Scotch civil law is conducted on very much the same principles with the English Court of Chancery, the proceedings and decisions of which are as little interesting to Englishmen, as the proceedings of the Court of Session are to Scotchmen. There is no point which the English public should guard with more jealous care than the appeal to juries in civil causes. This is nearly as necessary to secure the liberty of the subject, as criminal trials by jury. For, as the crown may appear as plaintiff or defendant before its own courts of law, the liberty of the subject might easily be brought into jeopardy by the ingenuity of lawyers, if the introduction of the jury did not compel them to render their enterprises and their tactics intelligible to the whole British public.

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* We had almost said that no English judge would have ventured on such a decision in the face of the English public; but we were somewhat staggered by observing that, in a recent ecclesiastical case, the judges gave their several opinions on the point of law in conformity with their known religious, or quasi religious, predilections; so that the public prints, aware of their predilections, could predict the result of their joint deliberation. But, be it remembered, that these judges were not administering the common or statute law of England, which is thrown open to the public by the power given to juries. They were administering a law as much excluded from the public as the Scottish law, and were in circumstances nearly akin to those of the Court of Session. The difference of procedure in the ordinary courts of English and Scottish law lies not in the individual character of the judges of each respectively, but in the constitution of their respective courts.

The main object which the English public should seek to attain in the administration of their law, is to bring their courts of equity to an analogous mode of procedure with the courts of law, by submitting equity cases to juries of intelligent men not of the legal profession. The present state of the Court of Chancery, the enormous fees of its officers, consequently the enormous expense of its suits; its interminable delays, the direct and powerful temptations which it holds out to retain property in the hands of the nominees of the court receiving payment for their care of it; the utter ruin that awaits any person of limited income who may be involved in its meshes, and which he may be without any design on his part, render it altogether a disgrace to the civilisation of the age. We know that lawyers would exclaim against such an innovation as impossible and ruinous. Some of them are already disposed to complain of the power given to juries even in the ordinary law courts, and desperate attempts have been made, in various ways, in effect to supersede them. In cases of libel they were for a time effectually superseded. And, doubtless, it would be more convenient for the lawyers to have the whole pleadings and decisions, as in the Scotch law courts, confined within their own corporation. But just for that reason, we hold that they are not competent judges in the case; and would say, as Sir Robert Peel said, when he proposed to supersede the Court of Chancery, in regard to the Incumbered Estates of Ireland, that the lawyers were the last persons whom he would consult on the subject. So we say with regard to the whole accumulated mass of corruption, in connection with the Court of Chancery. And we would answer all objections with this simple principle, that no law should exist in a civilised country, which is not capable of being made intelligible to the nation at large, together with the justice and necessity of it; and, that in proportion to the necessary complexity of the law, should be the pains taken to bring up the body of the people, by suitable education, to the power of understanding it. Better that persons, exposed to Chancery suits, were compelled at once to leave the decision of their claims to a throw of dice, than that all parties, which sometimes are public institutions, should be deprived of the use of their property for many years, often to their utter ruin. The legislature has lately been induced to cut right down through all its cobweb intricacies and subtleties, greatly, we believe, to the benefit of Ireland, by a simple act of Parliament; and it would relieve the country from an intolerable incubus if, by some sweeping measure of the same kind, its whole proceedings were thrown, by means of juries, open to the common sense of the country.*

These remarks on the political history of Europe, and on the administration of law, may seem somewhat remote from a treatise on the human mind. But they furnish illustrations of a great and most important principle in human nature, that the most powerful implement which we possess of influencing other minds, and consequently the acts of other men, is not brute force, however formidable that may be, but the communication of thought; and that the framing of the laws on the principles of justice between man and man, and the rendering of the people capable by education of understanding the law, and of understanding also the radical justice and reasonableness of it, form the only sure basis of a national law, commensurate with the extent of the nation. Such a people, and such a law, would be in no danger of revolution arising from among themselves. Some portion of them might be discontented; but their discontent would effectually be kept in check by the satisfaction of the great mass of the nation, and by their determination to uphold a law which they found to protect their persons and property from violence, and to preserve the peace and order of the community.

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* See Appendix, Note D.

CONCLUSION.

These then are the mental powers which the Great Creator has laid, as the foundation on which to rear his moral and responsible creature, man. And it may be a useful form in which to sum up what has been advanced, to view these natural powers which we have been contemplating, as the preparation made for the superinduction of the *moral* nature of man, and his responsibility to his Maker.

An intelligent mechanist on examining any machine, a clock for example, might usually, without any explanation from the maker of it, discern the use and construction of it. He might, perhaps, detect the use of it, by seeing its dial and indices, and its bell with the hammer attached to it, and then trace the contrivances by which its movements were effected. Or he might search first for the moving power, which he would detect as soon as he saw the weights, or discovered the spring in its case. He might then set himself to find what contrivance prevented the moving power, when wound up, from expending itself at once; and, tracing the wheels connected with it, he would see that each succeeding one would necessarily increase in velocity till he came to that which acts on the pendulum, and is controlled by it; and then measuring the length of the pendulum, he might find that it was calculated to swing seconds, so that the escape of every succeeding tooth of the wheel connected with it, marked a second. He might then trace the wheels from the pendulum to those which bore the indices, and would find that the velocity of one was twelve times greater than that of another; and the velocity of a third, sixty times greater than that of the second, by which he might infer that they were intended to indicate by their indices, respectively hours, minutes, and seconds. He then might examine the striking machinery, and find that it was so contrived, that as often as one of the indices came to a certain point on the dial, the hammer would strike the bell, and that it would strike it as often as the number pointed to by another of the indices. Thus the whole machine would be laid open to him,—the moving power, the regulating and controlling power, the indicating power, and the proclaiming power.

So, on examining the mind, when we think of the pleasure or pain which forms an element in many, perhaps originally in all our sensations, and observe how these sensations are caused by external objects operating on the organs of sense, we say here is the moving power which sets the whole machinery in motion. But is there no controlling and regulating power upon the motions that would be caused by the pain or pleasure of sensations? We search and find the discriminating power by which the mind discovers the qualities of external objects, and their adaptation to give pleasure or pain. And we then detect another motive power, in the pleasure connected with its discriminations and discoveries. But what effects do these motive powers produce? We find that they produce various emotions and operations in the mind itself,—as desire, fear, hope, joy, and sorrow,—and also cogitations, inferences, reasonings; but pursuing our track, we find the power of the mind over the body, a power which it exerts at will, and which becomes the acting and indicating power: and in connection with this, we find a proclaiming power in the organs of speech. But here is a power to which we found nothing analogous in the clock, namely, a registering power, by which all important acts of the mind and many of its cogitations are recorded, and recorded in such a way that they may at any time, according to certain laws, be brought up before the mind;—as if a clock had machinery connected with it, by which all its movements, and stoppages, and errors in indicating or striking, during the whole period of its existence, should be accurately marked, and a record of them preserved. Let us look a little more attentively at these various powers.

The motive or moving power.

The mind is introduced into the world with all its powers in preparation for movement, but they would lie dormant, were it not laid open by means of the organs of sense to the influence of the external world; as a steam engine may be complete in all its parts, but motionless, till steam is introduced to it from without. The action of the external world, through the organs of sense which move the mind, is the pain or pleasure which it occasions to it. This pleasure or pain is of two kinds. The first is that pleasure or pain which forms an element of the sensation itself; the second is a pleasure attached to our discerning resemblances and differences among our sensations. Pain also is experienced in discriminating between sensations; but it is not derived from the exercise of the discriminating faculty itself, but from the attention which it directs to painful sensations.

The pleasure and pain, that form elements of sensations, are the spring of sensual movements; while the pleasure derived from discerning differences and resemblances among our sensations, is the spring of intellectual movements.

Pain, or rather the desire to avoid pain, is the most extensively influential motive. The want of food, exposure to cold, or to too great heat, cause painful sensations, and threaten the loss of life; and, therefore, the great masses of mankind are engaged in constant efforts to avoid the pains of hunger, and cold, and heat, by procuring food and shelter. A large proportion of those who are not immediately engaged in obtaining food and shelter, are employed in seeking relief from pains to which they have subjected themselves by indulgence. By frequently receiving stimulants into the stomach, such as intoxicating liquors, opium, or tobacco, a want is created which causes a pain, almost as difficult to bear as the want of food. A certain style of dress, and of household economy, which is understood to mark a certain station in society, creates innumerable demands which cannot be neglected or evaded but at the expense of a mortification of pride, and sense of degradation more intolerable to many minds than bodily suffering. A large class of men are, therefore, constantly occupied in procuring not the necessaries of life—food and shelter, nor the indulgencies of artificial appetites, but in satisfying the craving demands of vanity and pride. Curiosity stimulates another class to action. That law of the mind by which the pleasure of sensations or of discriminations diminishes on every repetition, excites multitudes who are not incessantly engaged in seeking the supply of natural or artificial wants, to search for new sensations, new objects, new discoveries of differences or resemblances among objects, new analogies or relations or classifications among them. These are the more intellectual class; although even the intellectual operations of these are often prosecuted for the purpose of adding to their importance among their fellow-men.

These various pleasures and pains branch out into various emotions or passions, all of which are excited by the contemplation of pleasure or pain in various aspects. Desire, fear, hope, disappointment, are the suggestion of pleasure or pain in various connections and combinations, as already explained.

The objects of these emotions are transferred from the mere pleasure or pain to the external causes of them; as soon as we discover their immediate causes in external material objects or inferior animals, and their more remote causes in the character and acts of our fellow-men.

The recognition of the Deity as constantly present, moulding, controlling, governing all things, having all things at his absolute disposal, tends to direct some of these emotions, such as fear, love, gratitude, and admiration, to him as their object.

Those emotions, which consist substantially in the desire of obtaining pleasure, or avoiding pain, of some kind, but variously modified, constitute the motive power of the mental mechanism, without which it would lie inert and useless. But these emotions, if left without regulation and control, would keep the mind in a constant state of unrestrained activity, rushing from side to side, as it might be impelled by the various objects presented to it.

The regulating or controlling power

is, therefore, introduced. This power in its elements consists in the power of discerning differences and resemblances between our sensations; between those objects that cause sensations, and between our fellow-men—their various characters, their powers, and their dispositions to do good or to do evil, to afford pleasure, or to cause pain.

This discerning or discriminating power, called sometimes judgment, and which is the fountain of all knowledge, tends in various ways to control the motive power of the passions or emotions. For example, it sometimes enables us to foresee that the indulgence of a pleasant sensation will certainly be followed by a series of painful ones; or, that present submission to a painful sensation will prevent sensations still more painful, or will lead to pleasant sensations. Sometimes it enables us to foresee that by acting on the stimulus of an emotion, we shall excite emotions in other persons who have power to injure us, or to promote our happiness, that will induce them to withhold from us means of enjoyment, or to inflict upon us positive evil. By such discoveries as these we are taught to consult our judgment before we obey the impulse of our passions. This is a lesson which children, from their circumstances, are taught, with more or less efficacy, from the first dawn of intellect. Another discovery which our intellectual powers, operating on our consciousness, makes to us, tending to the checking and controlling and regulating of our passions, is, that we cannot cause pain to others without laying the foundation of painful recollections to ourselves; and that if we give pleasure to others, we lay the foundation of pleasant recollections in our own bosoms. This consideration manifestly tends to check the headlong gratification of such passions as anger, hatred, envy, revenge, and others similar, and to lead us to cherish and gratify such emotions as love, gratitude, compassion, generosity, and others of a beneficent character. It enables us also to discover that, although there is a certain pleasure connected with the gratification of such passions as revenge, yet that that pleasure consists merely in the removal of previous pain. The having constantly before the mind injuries fancied or real, with a tormenting craving after an opportunity of doing mischief to the person whom we believe to have injured us, far outweighs the momentary pleasure of gratifying that craving, and so removing the pain of it. The mischief, also, that we may have been able to effect, leaves behind it recollections that can afford pleasure only to a mind full of deadly malignity; a condition utterly incompatible with peace and comfort.

The highest exercise of the discriminating faculty operating on our knowledge of external objects, and our own consciousness, is our recognising the presence and attributes of the Deity, his propriety in all creatures, and lordship over all, his power over all, and, consequently, his power to do evil or do good to ourselves. When these views of the Deity are brought vividly before the mind, and are combined with the knowledge of him as our moral governor, the interested witness of our acts and thoughts, his hatred of wickedness, and his love of that which is good, and the responsibility under which he holds us, then we possess within ourselves the most powerful controller, regulator, and director of our emotions.

The will, or acting power.

The will, we have seen, is the mind in the act of choosing or refusing, and such acts are confined to its power over the voluntary motions of the body. We have explained that, in a looser sense, the mind is said to exert the power of choosing and refusing over its own operations; but such power is not direct and immediate, but circuitous, and chiefly, if not exclusively, exercised through its power over the body. An exercise of will, therefore, is an overt act, by which the state of the mind is ascertained and indicated. It is the result of its previous cogitations, emotions, reasonings, and final determination. Now it is of the utmost importance to a moral and responsible creature, that its cogitations and deliberations and passions should thus be brought to a decisive result in an overt act. Without such overt act, God could, indeed, judge of the moral state of the mind, and deal with it accordingly; but, without such overt acts, men could not discern the justice of God's dealings. Nay, the man himself under judgment could scarcely discern it; because he might be conscious of wicked passions rankling in his soul, and also of benevolent desires, and, therefore, without overt acts to express the results of his passions, he might be deceived with regard to the state of his own mind. But when the mind is brought to express its state by a decisive overt act—when a man moves any member of his body with the intention of doing good or evil, as when he moves his foot to convey his body to a certain place or in a certain direction with that intention, or his hand to strike, or his finger to point, or his tongue to speak, nay, even his eye to look significantly, all doubt is at an end; his mind has expressed the result of its previous cogitations, and the act remains as the evidence of that result.

The recording power.

This is perhaps the most significant and the most wonderful preparation in the mechanism of the mind for the moral responsibility which was to be connected with it. The memory is a register that every man is made to keep of all his acts, and even of many of his cogitations and designs, especially if they have in them the nature of moral good or evil. This register, however, is placed entirely out of his reach. He cannot prevent any act or any thought from being recorded in it. Any attempt to do so would only render the entry the more indelible. He cannot modify or alter any entry in his register. He may attempt to deceive others by hypocrisy and lies; but the facts of his life are written in his own memory with perfect fidelity, without excuse or palliation or misrepresentation. Nor can he efface any entry that has ever been made. There it stands written as by the finger of God himself. There is no power known which can reach the memory of man, to deface or modify in the slightest degree its faithful registry.

But while the keeping of this record is placed out of the reach of the man in whose bosom it is written, so that he has no power to prevent its being written, to modify it, or to alter or efface the writing, he is permitted, nay, compelled from time to time to peruse it. Objects are constantly presenting themselves, that bring his actions and thoughts before him. A person who has committed a crime cannot approach the place which was the scene of it, nor think of that place, nor meet with any of his accomplices, nor see the victim of it, or any of his family, nor think of him, nor read or hear of the perpetration of any similar crime, or of the punishment of a criminal, without having his guilt brought up before him as distinctly and vividly as it was on the day that he contracted it. Among the beautiful and significant narratives of scripture, we are told, that the brethren of Joseph, stung with resentment, envy and jealousy, plotted his death; that they were diverted from their purpose, let him down into a pit, and afterwards took him up and sold him to some merchants who were passing, and who took him to Egypt and sold him there for a slave; that his brethren then dipped his coat in blood and sent it to their father for the purpose of making him believe that Joseph was devoured by a wild beast. Twenty years afterwards they were confronted with him in Egypt, and the very first perplexity in which they found themselves involved, brought up the whole scene of their treachery and wickedness before them, with the most minute exactness, so that they could tell what one and another said, and how Joseph pleaded with them, and how they disregarded his entreaties. Eighteen years after that first occasion, on the death of their father, the whole scene again rose up before their minds, and filled them with apprehensions; and so doubtless it might have done, nay, and probably did rise up before every one of them, on many occasions, till the very hour of their death, when it might be recalled to them with more terror than ever.

Now let it be supposed that all men being responsible to God, are to be brought into his presence for judgment, they will come carrying with them a perfect record of the events and acts of their lives. The judge is thus furnished with the grounds of his judgment, written by the mechanism which he had contrived and placed in the bosom of every man; and, as he thus in effect wrote it, so he can read it, and cause every individual to read his own record, and perhaps also to read each other's. Men who have spent their lives in vice have only to be confronted with the associates, or with the victims of their crimes, or to be reminded of places which were the scenes of their wickedness, in order that the events of their lives may be brought up with perfect precision and clearness in succession before them. Such a man sees then the victim of a ferocious act of revenge, or of a system of hypocrisy and lies. He turns away to avoid the recollections that are rushing into his mind, but meets full in the face one of the accomplices of his crime: he is stunned, and again turns away in agony, and his eye encounters his parent, whose advices and warnings he had disregarded, and whose parental authority he had outraged. He is confounded, and casts his eyes downward, but there he sees at his feet his children, whom he had educated in vice. He is horror-struck; whither shall he escape? He looks upward, and there he meets the eye of the Judge fastened on him, watching his writhings, and searching him through and through. God has set his crimes in order before him: his secret sins in the light of his countenance. "And I saw a great white throne and him that sat on it, from whose face the earth and the heaven fled away, and there was no place for them. And I saw the dead, small and great, stand before God; *and the books were opened*, and another book was opened, which is the book of life: and the dead were judged out of those things which were written in the books according to their works—and whosoever was not found written in the book of life, was cast into the lake of fire."*

The sum, then, of the whole is this: the mechanism of the mind indicates that men were to be moved to action by pleasure or pain connected with their sensations and intellectual operations wrought into various emotions; that these emotions were intended to be under the control and direction of the judgment or intellect; that the intellect was intended to be under the influence of truth;—truth of every kind fitted to influence human emotions, truth respecting the qualities of external material objects, truth respecting their own souls, truth respecting the powers and dispositions of other men, truth respecting the presence and attributes of the invisible God, and the relation which he holds to man, truth respecting past events, especially their own past history; that the state of the mind was to be ascertained and indicated by the movements of the body; and that all the events and acts of their lives, so far at least as these were calculated to influence the final judgment to be pronounced upon them and their final destination, were to be faithfully recorded in their own memory, and called up before them from time to time, that they might not appear in judgment ignorant of the history of their lives, and of the account which they have to render.

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* Rev. xx., 11, 12, 15.

APPENDIX.

NOTE A.

I OBSERVE that Sir William Hamilton of Edinburgh, in his edition of Dr. Reid's works, expresses a very decided opinion that we receive from the sense of sight the conception of form and of objects external to the mind, or, as he expresses himself, a *non ego*. It is with much diffidence that I venture to impugn the opinion of an author so acute and so thoroughly acquainted with the whole literature of metaphysics. But there is one fact which appears to me to be decisive against that opinion, namely, that the sense of sight conveys to us the notion of only two dimensions, length and breadth. This, if I remember right, he admits. But matter exists in three dimensions, length, breadth, and thickness or depth. We cannot, therefore, obtain a conception of matter, or of empty space, which is the negative of matter, through means of the notion of only two dimensions. Nor can we receive the notion of anything locally distinct from self, without the notion of three dimensions, length and breadth being two, and the distance the third. I cannot doubt or deny, however, with Dr. Brown, that we receive no intimation of length and breadth, that is, superficial form, from the sense of sight. But, with that sense alone, I conceive it could only be form in the mind itself, or rather as mere mental conception; just as, from the sense of taste, or smell, or hearing, we might receive the notion of time or number, but only in the mind itself, as these senses certainly could never convey to us conceptions of dimensions of any kind, and consequently not of matter external to the mind.

Sir William expresses another opinion respecting the sense of sight, which I confess is to me incomprehensible, as coming from the pen of so able a writer; namely, that we cannot conceive of material form without colour, including white and black among the colours. The refutation of this notion is so obvious, that I almost suspect that I must misunderstand his meaning, or that he holds the opinion in some sort of transcendental sense, which my faculties are too obtuse, or too little practised, to comprehend. It appears to me only necessary to ask, how does a man born blind conceive of material form? Surely without reference to colour. If any piece of matter be put into my hands while I and it are in the dark, what notion of colour can I connect with it? I may believe that, if it were brought into the light, it would reflect some colour; but if I attribute to it any colour while it is in the dark, I attribute to it what has no existence. Besides, can I not conceive of matter so transparent as neither to refract or reflect colour? I can surely conceive of a cubic foot of atmospheric air, or of a basin full of carbonic acid gas; yet what colour can I ascribe to them? Is it possible that Sir William is so intent on his deep-sea fishing, that the objects that are floating on the surface under his eye escape his notice?

I think he also states, or at least conveys the idea, that the sensation of colour necessarily implies the notion of something coloured. That notion I apprehend is formed after we have obtained the notion of external objects, from which the sensation of colour usually proceeds. If one of the rays of the prismatic spectrum is made to fall on my eye, the green or the red, &c., what is the object that is green or red? Not the prism, for that is colourless transparent glass; not the sun, for that is white with a circular disc. It conveys the notion simply of colour, but not of a coloured object, and this notion is the truth; the notion of a coloured object would be false.

NOTE B.

It is supposed by some writers that the notion of space is a necessary form of thought, and the universality of it, and also the necessity of it, are chiefly relied upon as establishing that point. In regard to the universality of the cognition or notion, all men having material bodies over which their minds exercise a certain control, the notion of matter must be universal among them. The voluntary motions of these bodies are performed in space; it is therefore impossible to perform these voluntary motions without forming the notion of vacant space in which these motions are performed. The universality of the notion, therefore, says nothing as to its being a necessary form of thought. A mind without power over voluntary motion, and with no other senses than those of hearing, smelling, tasting, (and, as I conceive, although it had also sight and touch,) could think, nay, could experience pain and pleasure, desire and aversion, hope and fear; and yet it could form no conception of matter and space. Space is not therefore a universal form of thought, but only universal to minds possessing power over the voluntary motions of the body.

But it is alleged that the notion of space is not only universal, but necessary. This necessity, I apprehend, is not absolute, but relative. It is necessarily involved in the conception of matter. It is the negative of matter; but we cannot get rid of anything positive and its negative at the same time. Kant and others rely much on the fact, that, although we can get rid of the notion of matter, we cannot get rid of the space which it left unoccupied. Very true, we must have something or nothing. Take away the something, and the nothing remains. A man born blind has no conception of either light or darkness. If his eyes be opened so that he receives the conception of light, he necessarily at the same time receives the conception of darkness, and from that moment he must have either light or darkness: take away the notion of light, and the notion of darkness remains. Abstract time is the negation of all being; for all beings, whether mental or material, (at least created beings, and if, as some have hinted, that the Creator may not exist in time, his mode of existence is to us absolutely inconceivable,) exist in time. We may, therefore, get rid, in our conceptions, of being, but we cannot get rid of the time that remains. Just so, all matter exists in space. Empty space is the negation of matter. We may get rid, in our conception, of matter; but we cannot get rid of the space that remains. That the notion of space is not an absolutely necessary form of thought, but only relatively necessary to our conception of matter, is obvious from this fact, that we can think of mind and its operations—remembering, judging, desiring, hoping, &c.—without reference to space, because these operations are not movements of matter, and have no relation to space.

NOTE C.

Most or all the abstractions of Kant and his followers may be resolved into the power of the mind to observe differences, and consequently similarities, among its sensations original and remembered. If, in regard to any quality, the mind never had opportunity of observing any difference, it could never form a conception of that quality. If a condition could be conceived in which all things under the observation of the mind were of the same colour, the same temperature, the same bulk or quantity, or the same consistency, it never could form any conception of colour, temperature, bulk, or consistency. It is the power of comparing sensations or objects, and noting differences, and consequently resemblances, among them, that gives rise to these abstractions. If all things appeared of the same number, it would not be able to form the conception of number as a simultaneous quality. But the notion of time or duration is necessary to the conception of being or to the consciousness of prolonged existence, and the notion of consecutive number might be obtained from any changes that indicated the lapse of time.

The system of Kant, so far as I have been able to form any conception of it from a translation of some part of his works, and without having been able to master some of his explanations or definitions of terms, appears to me to be founded on fallacy. He divides all cognitions into pure and empirical. By empirical, he means those which are obtained by experience, which he maintains must always be uncertain, never amounting to more than probability. By pure cognitions, he means those that are known by intuition or prior to all experience, which he maintains can alone amount to certainty; and therefore he seeks to found a system of philosophy and morals upon these intuitive or *à priori* cognitions. On this system we observe—

1. That his pure cognitions, such as time, space, and the axioms of mathematics, are as empirical as his empirical cognitions. The cognition of time is derived from the observation or consciousness of prolonged existence; that of space, is derived from the cognition of matter, which is itself derived from our power over the voluntary motions of the body, and this cognition, although it may be native, is, I apprehend, not intuitive. Most of the axioms of mathematics depend on our cognitions of matter and space. Those that do not, such as "Things that are equal to the same are equal to one another," or more generally, "Things that are like the same in any particular are like one another in that particular," we apprehend, are not, strictly speaking, self-evident, but are received upon experiment. A child, or a savage, we apprehend, would not, as soon as he understood the words, assent to the

truth of the proposition, but would make trial of it in particular instances, and would thus soon convince himself that, however frequently he made the trial, the result would be always the same.

2. No part of such a system of philosophy or morals can be more certain than the arguments by which he seeks to prove that his pure cognitions are not empirical. Now these arguments, so far from being themselves self-evident, are complex, depending on exact and minute distinctions, in which he and we may be deceived. But, a chain of reasoning, like a material chain, is no stronger than the weakest link of it. Thus he holds that the existence of matter and space are intuitive forms of thought, and that the external world is perceived intuitively by the sense of sight. Why? Because the perception of it by the sense of sight is universal. Is every cognition by the sense of sight, which is universal, intuitive? That he dare not assert, because the perception of distance by the sense of sight, at least within certain limits, is as universal as the perception of the external world. Every man who has the use of his eyes can see that an object is within reach of his arm, or that it is at the other end of the room, as certainly as every man can perceive objects external to himself. But there is a wide difference, Kant argues, between these two universal perceptions, which he proceeds to explain. We do not here dispute the validity of the distinction; but we say that it is not self-evident, and that his whole theory is not stronger than the arguments by which he would establish that distinction. The attempt to establish intuitive perception by reasoning appears to bear absurdity on the face of it. If a perception were really intuitive, it would require no reasoning to establish it. But he relies much on the necessity, as well as universality, of certain cognitions. We have already seen that necessity would not prove them to be intuitive. We have seen that, as the universality of some cognitions does not arise from their being intuitive, but from an experience which must be common to all men, so that their necessity is only a relative necessity, depending upon prior empirical cognitions. See note B.

3. Upon the system generally, we would remark, that as we are made to depend for our existence, for the preservation of our species, and for all our comforts on what Kant calls empirical knowledge, it is not probable that we can possess knowledge of really existing beings, more certain. Mathematical demonstration gives more certainty, but it is employed on the measurement of space, which is a mere negation of actual existence. From the moment that an attempt is made to apply it to any positive thing, it becomes as empirical and uncertain as any other branch of knowledge. The demonstrations, then, rest on an "if," and that "if" ascertained by observation and testimony—nay, very often on testimony which would not be received in a court of justice to decide a question of property to the amount of twenty

shillings. Nevertheless we cast no doubt on these discoveries of philosophy, which we believe to be much more certain than many most satisfactorily proved decisions in courts of justice.

God has made us dependent for the salvation of the soul on what Kant would call empirical knowledge—knowledge not founded on what he denominates pure reason, but on human testimony, fortified, however, in a manner that renders it infinitely more certain to the great mass of human intellects than the reasonings by which he would establish his axioms of pure reason, and the demonstrations which he would found on them; and we apprehend that the seeking to establish a system of morals, which we presume includes religion or our duty to God, on any reasoning supposed to be more pure and certain than the evidence on which God has been pleased to rest the gospel of his grace, would tend only to weaken our faith, and perhaps betray us into infidelity.

NOTE D.

Another and an astounding example of the gross absurdities into which these hole-and-corner laws, the administration of which is confined within the legal profession, and the gross injustice to which the public may be subjected by them, we have had in the recent case of the Irish Presbyterian marriages.

Presbyterians from Scotland were introduced into Ireland under the sanction of Government, and their ministers were placed on the same footing with the Episcopal clergy. Wherever Presbyterians were settled, they received the tithes of the parishes from which the Roman Catholic clergy had been ejected, and marriages celebrated by them were accounted equally valid with the marriages celebrated by the Episcopal clergy. The Act of Uniformity, in the reign of Charles II., threw them out of the parish emoluments; and, as a sort of compensation for these, a grant, called the Royal Bounty, or "Regium Donum," was awarded to them. The law, however, with regard to marriages celebrated by them was untouched; and they continued to celebrate marriages, chiefly, of course, among their own people, but also in multitudes of instances in which one of the parties belonged to the Episcopal Church, unchallenged. The Episcopal clergy, however, sometimes disputed these marriages, not by appealing to the law, but simply by their own private assertions. At a later date (we have not the Act by us) a clause was introduced into an Act of Parliament authorising Presbyterian marriages under certain circumstances. This seems to have been introduced clandestinely and artfully, for the purpose of casting doubt on the validity of these marriages under other circumstances.

This rendered the Presbyterian ministers anxious to know the law on the subject, that they might know their own duty. To our knowledge, the judge of the Prerogative Court was anxiously consulted by one of the Presbyterian ministers of Dublin; but no distinct statement of the law could be obtained. The minister particularly inquired by what rule or principle he was to determine whether any individual was a Presbyterian or not. Should he be a contributor to the expenses of the congregation? Should he be in attendance for any given time? Should he be a communicant? The answer was to the effect that there was no legal mode of entering the Presbyterian Church, as there was of entering the Establishment from the Church of Rome, namely, by the public ceremony of recantation. That, seeing the individual in his place of worship, or receiving an application from him to marry him, was *primâ facie* evidence of his being a Presbyterian. We have ourselves consulted lawyers on the subject, with no better success; and some of our ministers have offered publicly to marry persons belonging to the Established Church openly, before any witnesses, that the case might be brought into the law courts, and the point decided; but the challenge was not accepted. Hundreds of marriages were accordingly celebrated every year. The legitimacy of the births of thousands of individuals depended on these marriages; the possession of a large proportion of the landed estates of Ulster depended on them. The courts of law had uniformly recognised them in deciding on inheritances, and all other rights depending on lawful marriage. All public offices, in paying pensions, annuities, &c., &c., recognised them.

After matters had proceeded thus for about two centuries, some lawyer, eminent for antiquarian lore, fished up, from no one knows what cesspool of mud, a document which had been unheard-of from the days of the Reformation, which seemed to be against marriages celebrated by any but Episcopal ministers. A case of Presbyterian marriage was brought to trial, and, after much learned discussion, it was found not good in law. This decision was confirmed in the House of Lords; and thus, some 500 ministers, men of education, who were fully capable of understanding any intelligible legal document,—men honestly desiring to know their duty that they might do it, were to their utter astonishment, found, with their predecessors, for two centuries, to have been habitually acting in violation of the law without knowing it; that thousands of the people were illegitimately born, many of them, and their fathers before them, in possession of landed and other property, to which they had no legal title. Many married people began to look somewhat oddly at one another, finding that, in the eye of the law, they were living in concubinage; and one case came within our knowledge, of a man taking some initiatory steps in the direction of getting rid of his wife, on the ground of this decision. An Act of Parliament was immediately passed legalising all past marriages celebrated by Presbyterian ministers, which was followed by another, placing all Protestant marriages in Ireland under new regulations.

But let it be supposed for a moment, that these subsequent Acts had not been passed—that some influential party in the state, bigotedly opposed to Presbyterians, and rejoicing in the opportunity of throwing the Presbyterian ministers and people of Ireland into distress and perplexity, had successfully resisted the passing of these Acts, what a source of indescribable mischief would not this state of the law have proved! That it did not produce that mischief, no thanks to the legal profession, but to the popular element of the constitution, which superseded and annulled the blunders of the hole-and-corner proceedings of the lawyers. But would it not be more wise to let in the popular element into the administration of the law, by the effective employment of juries, than to let the lawyers proceed with such laws unchecked till they threaten some prodigious mischief, and then to supersede by an act of authority the effects of their blunders, or, it may be, their artifices? If a popular assembly may beneficially supersede the laws, abrogate old laws, and enact new ones, surely popular assemblies, under the advice of lawyers, may be capable of administering the law. There is nothing in the nature of those rights or wrongs of which those laws take cognisance, from the administration of which all lay interference is excluded, that necessarily renders them unintelligible to educated men not lawyers. There is nothing in the tenure or transference of lands, apart from the antiquated theories with which the holding of land is connected, or with the transmission of inheritances, or with wills or testaments, so recondite as to place them beyond the intellect of men of common sense, yet ignorant of the antiquities and subtleties of law; and the only effectual check upon such a tissue of preposterous absurdities as the marriage law of Ireland has exhibited, is to subject the whole law to the check and control of the common sense of the nation by means of juries.

THE END.

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